

TACEESM
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INFO DAY

NUACA 12.07.21

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Co-funded by the
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TACEESM 2020|23



618883-EPP-1-2020-1-IT-EPPKA2-CBHE-JP

**Transforming Architectural and Civil Engineering Education towards
a Sustainable Model (TACEESM)**

**«Ճարտարապետության և քաղաքացիական ճարտարագիտության
կրթության վերափոխումը կայուն մոդելի» (TACEESM)**

*Ջեկուցող՝ Իրինա Վանյան,
տնտեսագիտ.թեկնածու, դոցենտ*

2021 թ.

Goals of TACEESM Erasmus+

TACEESM aims to improve quality of higher education in partner countries in the field of architecture and civil engineering and enhance its relevance for the labour market needs and in accordance with European growth and development strategies

This project aims to develop professional architects and civil engineers with European oriented minds in Bosnia & Herzegovina, Armenia and Belarus. Professionals that will bring European values to the partner countries, will be a refreshment to the market in these countries.

This project aims also to connect the graduated students with companies as they will take part in discussions related to the required courses that will improve and increase the chance of potential candidates in finding jobs.





PARTNERS



Code	Acronym	Title	Country
P1	Ud'A	University G. D'Annunzio	Italy
P2	UM	University of Maribor	Slovenia
P3	UMA	The University of Malaga (School of Architecture and of Engineering)	Spain
P4	HTWK	LEIPZIG UNIVERSITY OF APPLIED SCIENCES (Faculty of Architecture and Social Sciences, Faculty of Civil Engineering)	Germany
P5	IBU	INTERNATIONAL BURCH UNIVERSITY Architecture	BiH
P6	UNBI	University of Bihać	BiH
P7	UNMO	Dzemal Bijedic University of Mostar	BiH
P8	NUACA	National University of Architecture and Construction of Armenia	Armenia



PARTNERS



Code	Acronym	Title	Country
P9	NPUA	National Polytechnic University of Armenia	Armenia
P10	BNTU	The Belarussian National Technical University	Belarus
P11	BrSTU	Brest State Technical University	Belarus
P12	CD doo	CUBE DESIGN d.o.o. Sarajevo (Cube Design is an inter disciplinary, research-based studio of architecture, based in Sarajevo, Bosnia and Herzegovina.)	BiH
P13	KF	“KF Gradnja” doo (KF Gradnja doo is a limited company for trade, civil engineering and services registered in 2014. The company is licensed for civil engineering in high and low-rise construction)	BiH
P14	CARA	Chamber of Architects of Armenia	Armenia
P15	NIPTIS	State Enterprise “Institute of Housing-NIPTIS named after Ataev S.S.”	Belarus
P16	BUA	The Belarussian Union of Architects	Belarus

Work Packages of TACEESM Erasmus+



WP1 - Current programmes in EU and partner HEIs



Lead Organization

**University of Maribor (Faculty of Civil Engineering,
Transportation Engineering and Architecture) - UM
(FGPA), Slovenia**



Co - Leader

Brest State Technical University, Belarus

ACT 1.1 Analysis of related courses/programmes and practices at **EU universities**
(Italy, Slovenia, Spain, Germany)

ACT 1.2 Analysis of related programmes and practices at **partner universities**
(Bosnia and Herzegovina, Armenia, Belarus)

ACT 1.3 Analysis of market needs in **partner countries**
(Bosnia and Herzegovina, Armenia, Belarus)

ACT 1.4 Creation of the learning outcomes based on the needs from labour market and industry

ACT 1.2 Analysis of related programmes and practices at **partner universities**
(Bosnia and Herzegovina, Armenia, Belarus)

«073101.01.7 – Ճարտարապետություն» մագիստրատուրայի կրթական ծրագիր

«073201.01.6 – Արդյունաբերական և քաղաքացիական շինարարություն» բակալավրիատի կրթական ծրագիր

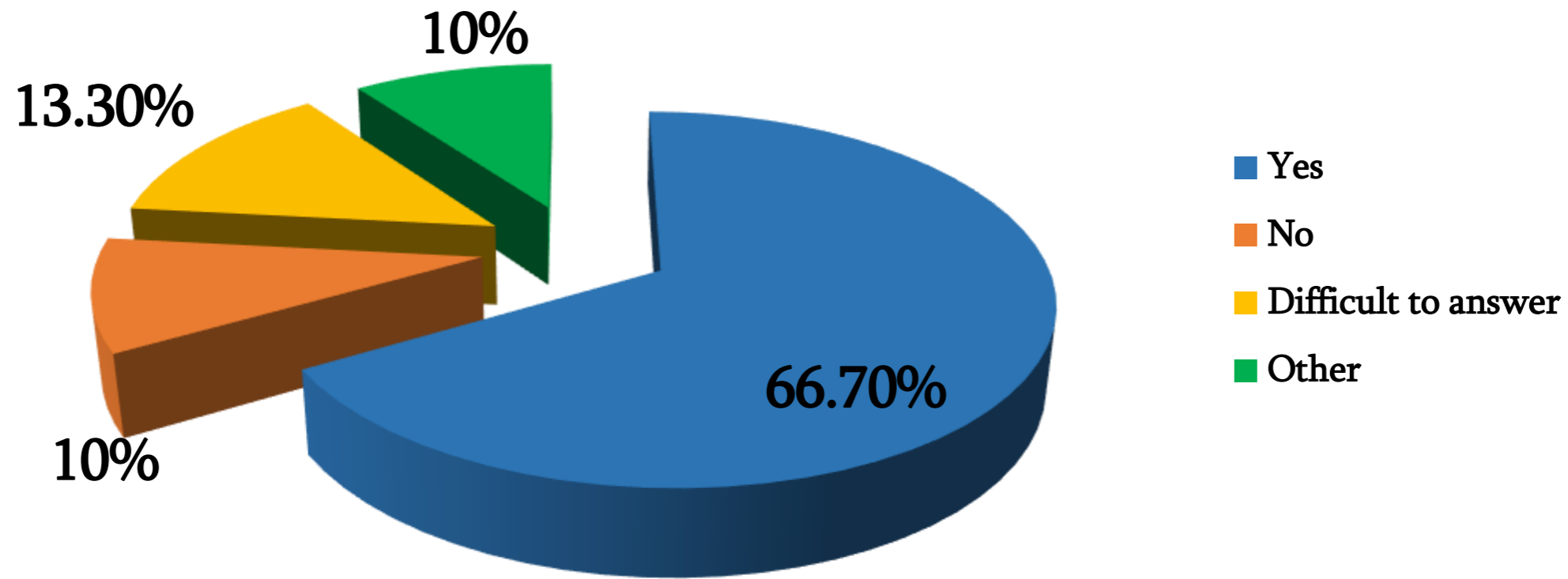
«073102.02.7-Ջերմագազամատակարարում և օդափոխություն» մագիստրատուրայի կրթական ծրագրի

ACT 1.3 Analysis of market needs in **partner countries**
(**Bosnia and Herzegovina, Armenia, Belarus**)

The online Questionnaire has been spread by the NUACA team of TACEESM Erasmus+ project within the network of employers in the field of architecture and civil engineering. The employers of companies/organizations was informed preliminary about the survey, and the agreement on the engagement in the survey was confirmed by the employers. 32 employers have been involved in the online survey by these principles.

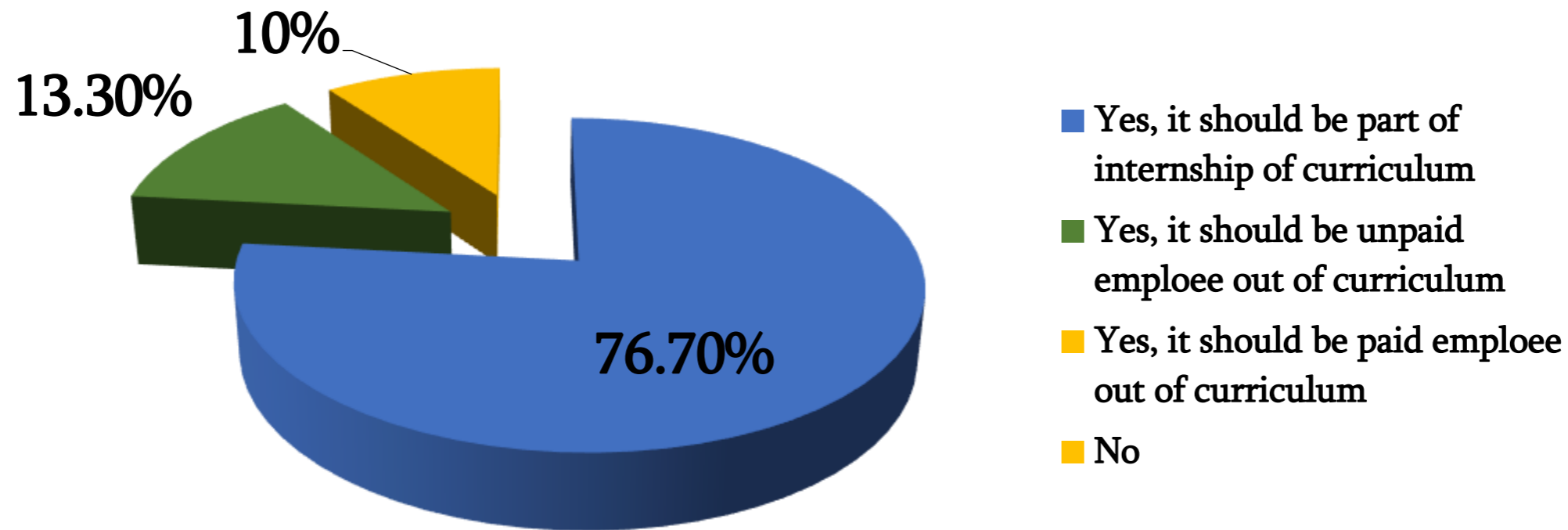
ACT 1.3 Analysis of market needs in **partner countries**
(Bosnia and Herzegovina, Armenia, Belarus)

Q11. Do you think that architecture/civil engineering studies prepare students well for their professional life?



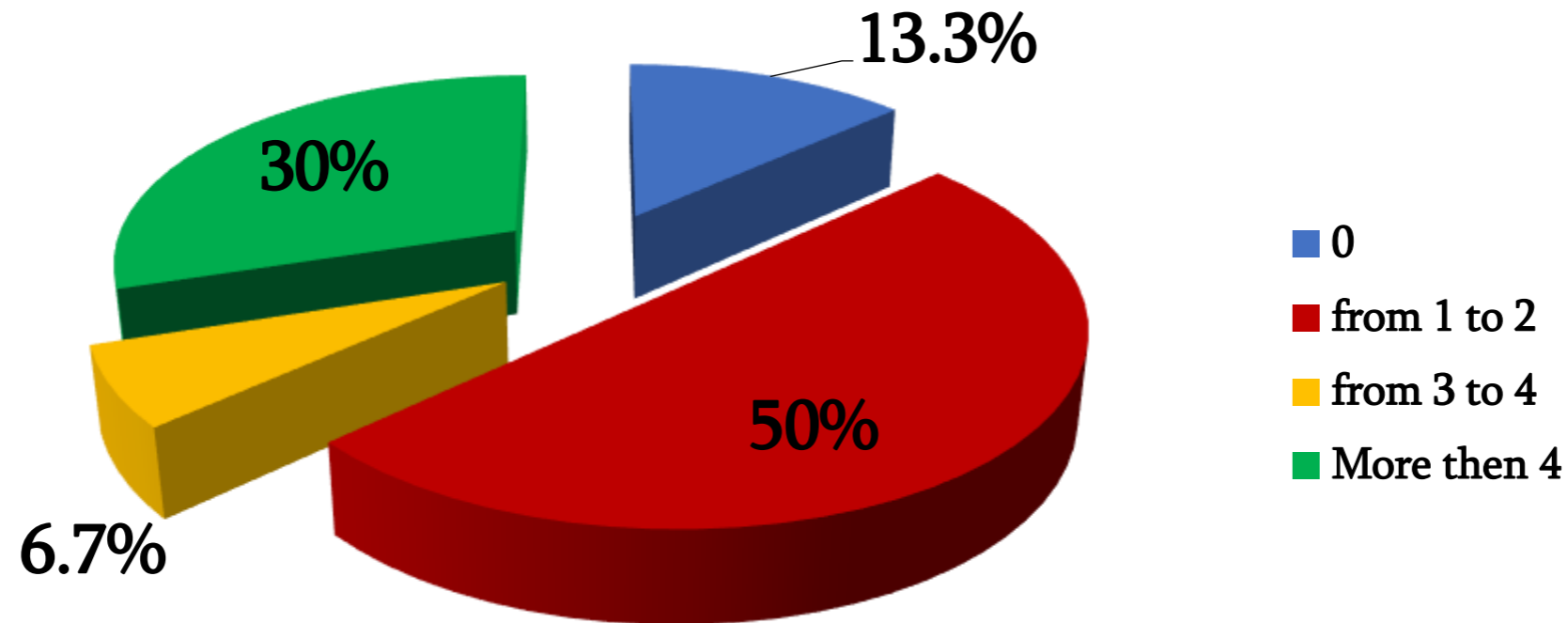
ACT 1.3 Analysis of market needs in **partner countries**
(Bosnia and Herzegovina, Armenia, Belarus)

Q17. Do you think that students should gain some work experience in architecture/civil engineering practice during their studies?



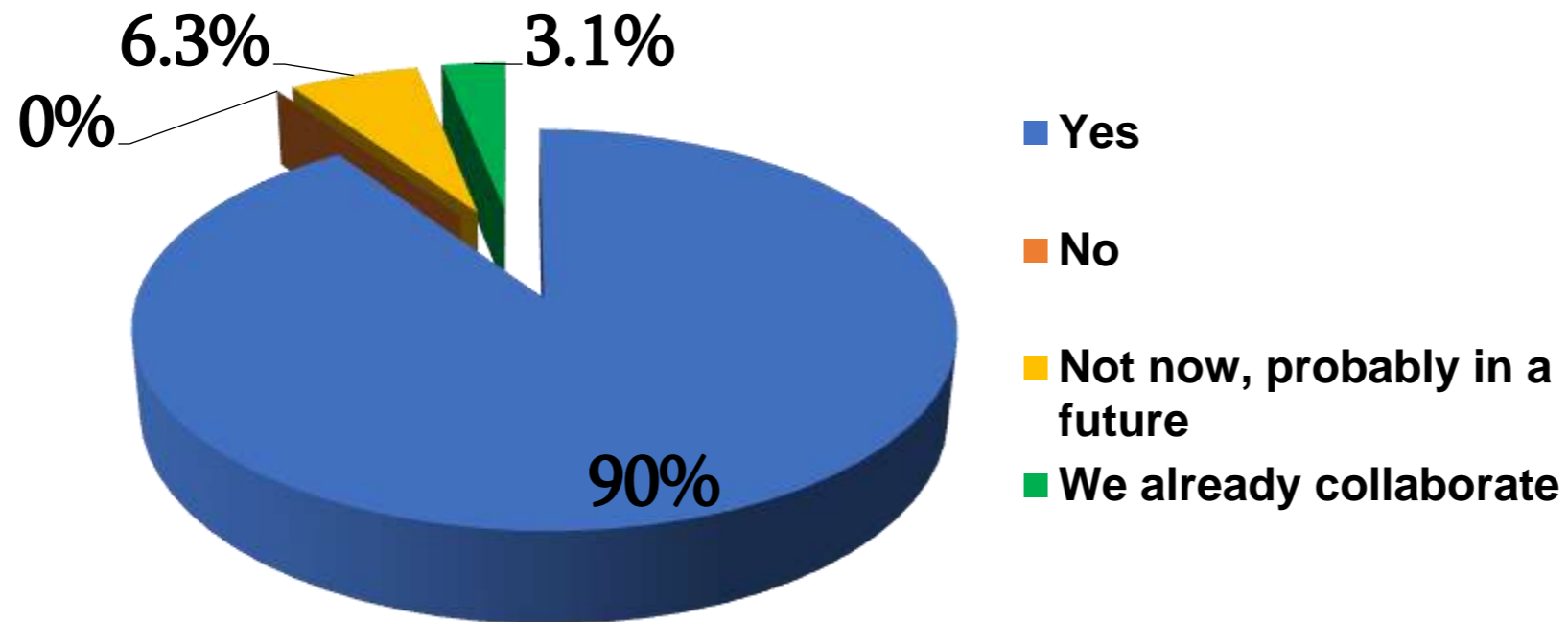
ACT 1.3 Analysis of market needs in partner countries
(Bosnia and Herzegovina, Armenia, Belarus)

Q18. With how many universities have you established collaboration?



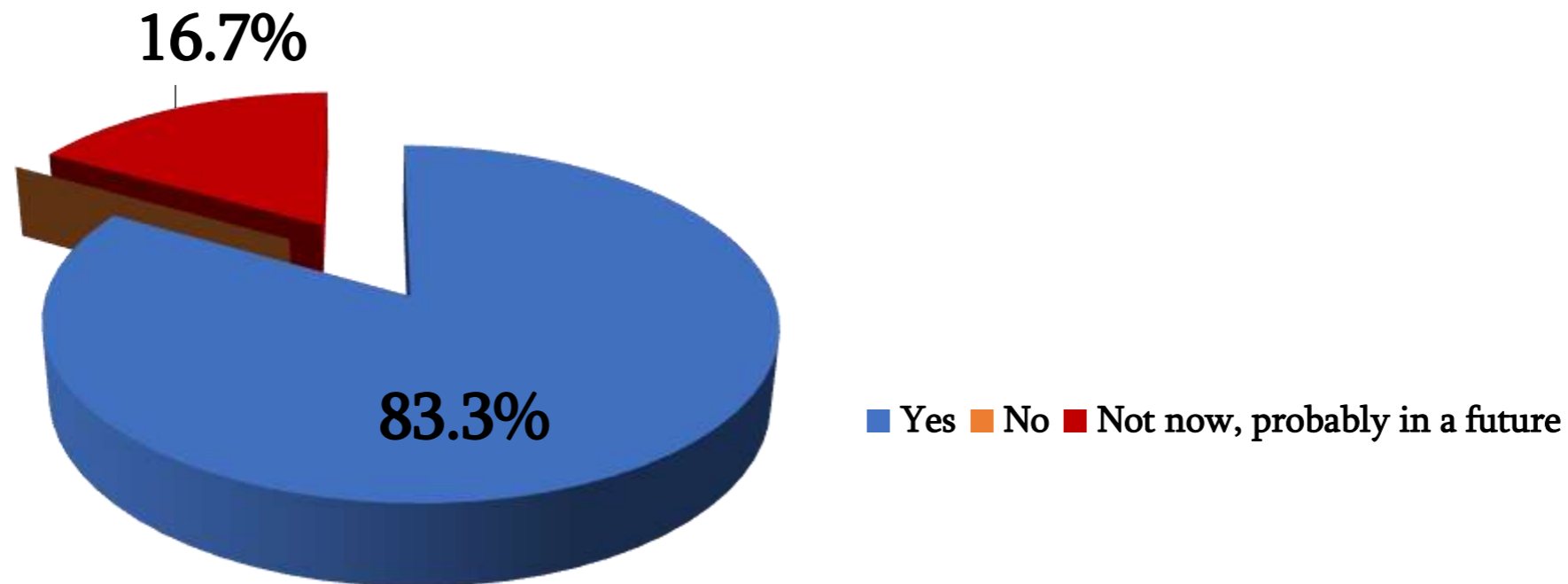
ACT 1.3 Analysis of market needs in **partner countries**
(Bosnia and Herzegovina, Armenia, Belarus)

Q19. Would your company be interested in collaborating with the university?



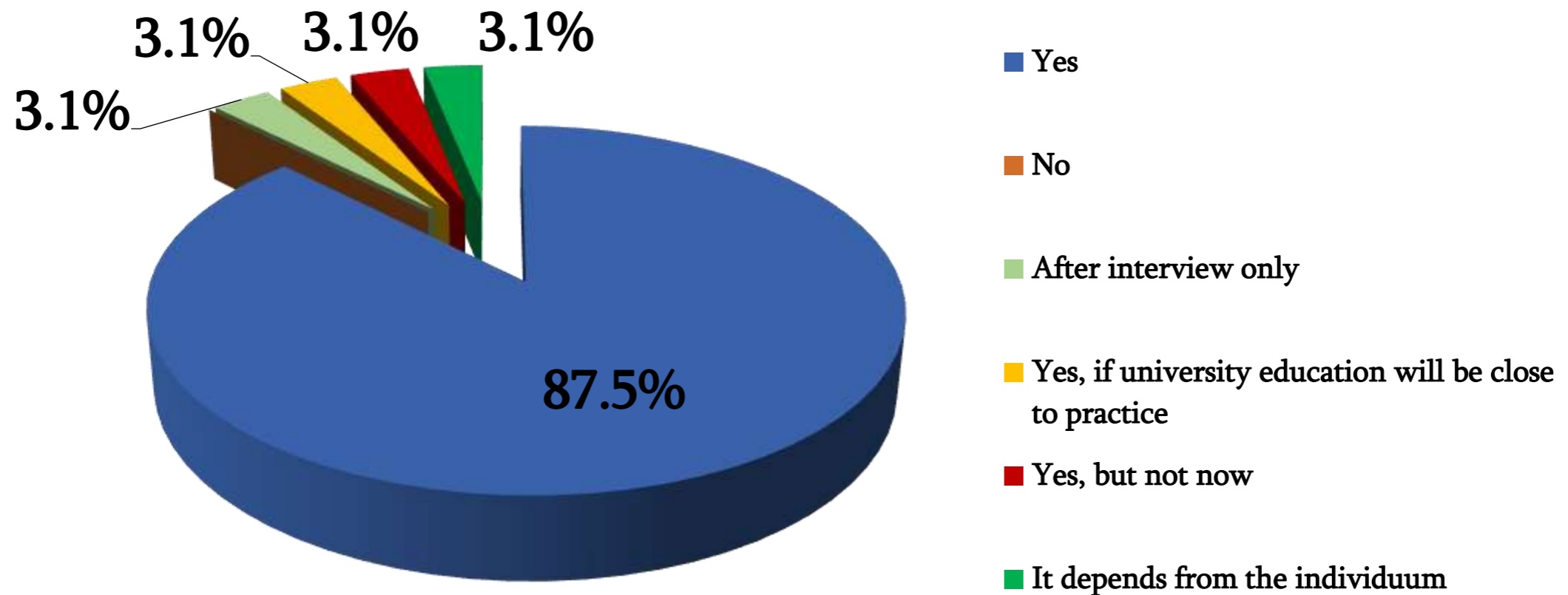
ACT 1.3 Analysis of market needs in **partner countries**
(Bosnia and Herzegovina, Armenia, Belarus)

Q22. Would your company be interested in offering placements for student internships?



ACT 1.3 Analysis of market needs in partner countries
(Bosnia and Herzegovina, Armenia, Belarus)

Q24. Would you be interested in hiring university students?



ACT 1.4 Creation of the learning outcomes based on the needs from labour market and industry

General	Professional
Critical thinking	Digital skills
Dealing with complexity	Research skills
Decision making	Professional knowledge, skills and abilities
Endurance (e.g. working under pressure, handling stress and deadlines)	Acquisition of BIM technology
Work ethic (e.g. self-discipline, willing to work hard)	Qualified design development
Dealing with uncertainty	Acquisition of IT technologies
Determination (e.g. commitment, persistence, willingness to achieve)	Business ethics
Handling criticism	Design norms knowing
Working with clients	Computer skills
Working with clients	Economic fundamentals in design
Business management skills	Foreign languages for architecture and civil engineering
Collaboration skills/team work	
Presentation skills	
Mediating skills (e.g. negotiation, conflict mediation)	
Project management skills	

Work Packages of TACEESM Erasmus+



WP2 - Development of new courses in the field of architecture and civil engineering



Lead Organization

University G. D'Annunzio - Chieti-Pescara, Italy



Co - Leader

University of Bihać (UNBI), BiH

SCHEDULE OF ACTIVITIES

No.	Activity	Responsibility	Date Deadline	Description	Status
1	FINAL LIST of courses to be modernized and new courses to be created by partner Universities	Partner Universities	16 April 2021	<p>List of courses (existing courses for modernization and new courses to be created) suggested by partner Universities in the project application must be revised and if needed updated.</p> <p>Important Note! The total number of courses in the FINAL LIST suggested for modernization and new courses should be kept unchanged as in the project application.</p>	
2	Equipment specification	EU Universities	16 April 2021	From EU Universities is expected to present their University premises and specific equipment that they are using as supporting tool for conduction teaching process within certain courses.	
4	ONLINE Meeting	All project partners	M 6 April 16, 2021 at. 10.00 am (ECT)	<p>Launch of Work Package 2 by Università G. d'Annunzio Pescara, Italy</p> <ul style="list-style-type: none"> - <u>Introductory to all WP 2 activities and schedule</u> - Presentation of the final list of courses by partner Universities - Presentation of University premises and equipment by EU Universities 	

5	List of Literature, Equipment and Software	Partner Universities	15 May 2021	<p>Partner Universities should suggest specific list of equipment for the amount of 30 000 EUR, except for NPUA where the budget is 10 000 EUR, that before tender procedure must be approved by the Brussels.</p> <p>List of the generic equipment for partner Universities that is within budget table is given below just as a reference:</p> <p><i>10 computers, softwares (BIM software), 5 scanners, 5 printers, 5 LCD projectors, 30 Books (10 Architectural theory, 10 architectural design and 10 sustainable architecture), Videoconferencing Suite, 3 Interactive boards</i></p> <p>NPUA <i>server for online platform, 3 computers, 5 scanners, 5 printers</i></p>	
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ACT 2.1. Modernization of existing courses at BSc and MSc level

6	VISIT 1 to LEIPZIG	Two members from each partner University	<p style="text-align: center;">M 6 15 Apr 2021 - 15 May 2021</p> <p style="text-align: center;">TBD 26 April - 30 April 2021</p>	<p>The process of modernization of existing courses at BSc and MSc level will follow visits of partner universities (two members from each partner university) to the LEIPZIG UNIVERSITY OF APPLIED SCIENCES - HTWK Germany for 7 days in M6. Visits will be planned according to partner HEIs needs and different group of courses that they have (architectural and civil engineering).</p> <p>Both working groups (architectural and civil engineering) will visit LEIPZIG UNIVERSITY OF APPLIED SCIENCES – HTWK Germany. Architectural working group will visit Faculty</p>	
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				of Architecture and Social Sciences - HTWK Leipzig and civil engineering working group will visit Faculty of Civil Engineering - HTWK Leipzig.	
7	LOCAL WORKSHOP 2	Partner Universities	<p>M 7 24 May - 28 May 2021</p> <p>One day within suggested week 24 May - 28 May 2021 TBD by each partner university</p> <p>IBU Date: UNBI Date: UNMO Date: NUACA and NPUA Date: BNTU Date: BREST Date:</p>	Crucial discussion within partner universities representatives (minimum three academic staff from each partner university) will be organized in one local workshop (LW2) in M7 in each partner university with the support of industry.	
ACT 2.2 Design of new courses / curricula at BSc level					
8	LOCAL WORKSHOP 3	Partner Universities	<p>M 8 21 Jun - 25 Jun 2021</p> <p>One day within suggested week 21 Jun - 25 Jun 2021 TBD by each partner university</p> <p>IBU Date: UNBI Date: UNMO Date: NUACA and NPUA Date: BNTU Date: BREST Date:</p>	<p>Active participants of one local workshop (LW3) in M 8 at each partner university will be academic staff (minimum three academic staff from each partner university) and EU partners (online). Also, in order to respond to the market needs in the establishment of new courses representatives from industry will be involved as well.</p> <p>The process of establishment of new courses will be reinforced by visit conducted as part of the ACT 2.1. in M 6 of partner universities (two members from each partner university) to HTWK Leipzig. In that way partner universities will be familiar with the infrastructure of EU university needed for</p>	

				implementation of their programmes.	
ACT 2.3 Design of new courses/ curricula at MSc level					
9	VISIT 2 to LEIPZIG	Two members from each partner University	<p>M 8 15 Jun 2021 - 15 Jul 2021</p> <p>TBD 28 June - 2 Jul 2021</p>	The process of establishment of new courses will follow visits of partner universities (two members from each partner university) in M8 to the HTWK Leipzig. In that way partner universities, will be familiar with the infrastructure of EU university needed for implementation of their programmes.	
10	LOCAL WORKSHOP 4	Partner Universities	<p>M 9 26 Jul - 30 Jul 2021</p> <p>One day within suggested week 26 Jul - 30 Jul 2021 TBD by each partner university</p> <p>IBU Date: UNBI Date: UNMO Date: NUACA and NPUA Date: BNTU Date: BREST Date:</p>	Developing new master courses will rely on active participation in one local workshop (LW 4) in M9 of academic staff from each partner university (minimum three academic staff from each partner university) and experts from EU universities (online).	
11	WORKSHOP 2	All project partners	<p>M 11 15 Sept 2021 - 15 Oct 2021</p> <p>TBD 10 Oct 2021</p>	<p>WORKSHOP 2 (WP2) organized at University G. D'Annunzio, Chieti-Pescara that will be attended by two persons from each institution (partner and EU).</p> <p>This workshop is now planned in presence.</p>	
12	Final decision on new	Partner	M 15		

	courses	Universities	15 Jan 2022 - 15 Feb 2022	Final decision on new courses will be discussed on the University Council and Senate separately for each partner country by the M15.	
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ACT 2.4. Accreditation of the programme at the partner universities

13	Preparation of all documents for recognition/accreditation of program	Partner Universities	Latest until M19 15 May 2022 - 15 Jun 2022	<p>Until M19 all steps by each partner university will be conducted to secure that programmes and new courses are successfully recognized/accredited at M22 and that remain as regular study programmes.</p> <p>Important Note! Depending on the governance of the national higher education system in partner countries necessary steps will be undertaken to ensure recognition/accreditation before the end of the project.</p>	
14	Recognition/accreditation of program	Partner Universities	M 22 15 Aug 2022 - 15 Sept 2022	Recognition/accreditation of new Master and Bachelor courses/program is expected to be complete by the end of M 22.	

WP2 - Development of new courses in the field of architecture and civil engineering

MODERNIZED COURSES

ARCHITECTURAL

1. Computer Literacy in Architecture
2. Architectural Structures
3. Construction material science
4. Architecture
5. Freehand Drawing
6. Contemporary Architectural Discourse
7. Urban Design
8. Architecture Landscape and Technology
9. Multifunctional Space Design
10. Critical Theory/ Culture and Architecture

CIVIL ENGINEERING

1. Construction materials
2. Introduction to engineering informatics
3. Statics in civil engineering
4. Planning and construction of specific road facilities
5. Construction modeling
6. Reinforced concrete and masonry structures
7. Timber and plastic structures
8. Advanced Structural Analysis
9. Advanced Construction Technology and Management`
10. Civil Engineering Materials

WP2 - Development of new courses in the field of architecture and civil engineering

DESIGNED COURSES

ARCHITECTURAL

1. Professional Practice
2. Studies in light and materials
3. Ornament Theory and Design
4. Contemporary Architectural Discourse
6. Techno-Sensation Architecture
7. ~~Green Design and Interior~~
8. BIM Technology
9. Architectural projection of contemporary construction systems
10. Territory Improvement and engineering development of area
11. Sustainable architecture
12. Project management for architects
13. Contemporary methods of preservation of historical environment

CIVIL ENGINEERING

1. Structural Stability
2. Advanced Structural Analysis
3. Construction Machinery and Equipment's
4. Road maintenance and repair
5. Construction plant and equipment
6. Waste management
7. Operations Research and Linear Programming
8. Computer-Aided Design for Construction
9. Applied Hydraulics
10. Actions on Structures

WP3 - Capacity building - 40 academic staff from partner countries will be trained, new equipment and online platform installed.

Lead Organization

University of Maribor (Faculty of Civil Engineering, Transportation Engineering and Architecture) - UM (FGPA), Slovenia

Co - Leader

National Polytechnic University of Armenia Foundation – NPUA



WP4 - University Enterprise Collaboration - Network between industry and universities, internship program and joint projects will be created.



Lead Organization

University of Malaga, Spain

Co - Leader

UNMO, Mostar, BiH

WP5 - Implementation of new programmes - Modernized and designed BSc and MSc courses implemented, internship and online platform functioning.



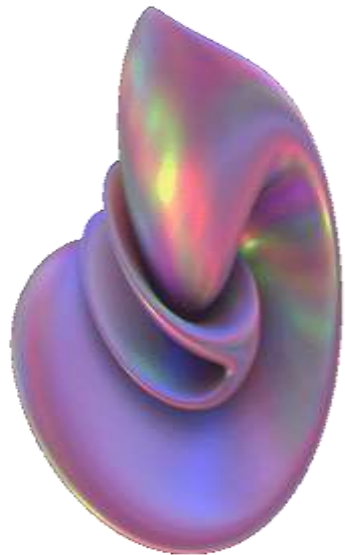
Lead Organization

**LEIPZIG UNIVERSITY OF APPLIED SCIENCES –
HTWK Leipzig, Germany**

Co - Leader

The Belarussian National Technical University (BNTU)

WP6 - Quality Control and Monitoring - creation of procedures for quality control and monitoring, internal quality control activities, external quality assurance activities, external financial audit.



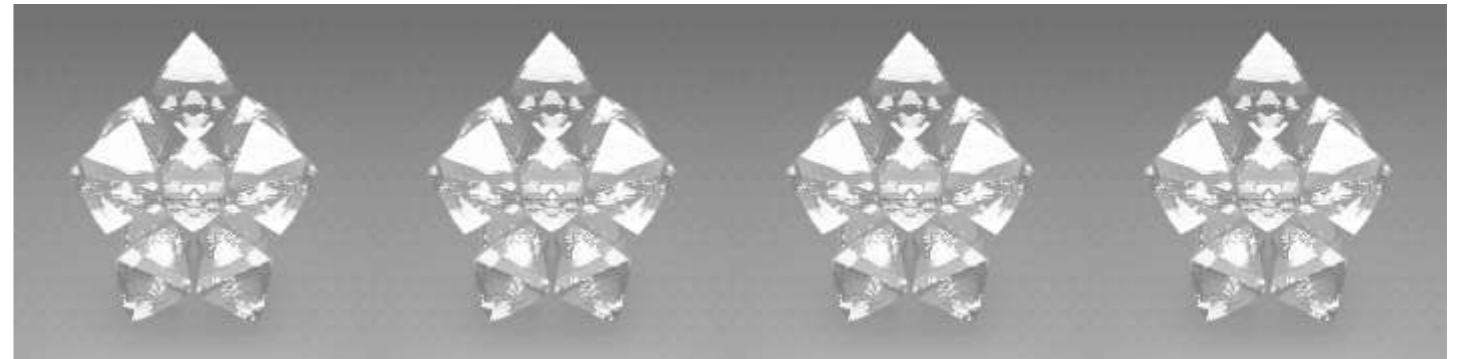
Lead Organization

**LEIPZIG UNIVERSITY OF APPLIED SCIENCES –
HTWK Leipzig, Germany**

WP7 - Dissemination & Sustainability - establishing of dissemination plan, setting up and maintaining project Web site, dissemination activities, final conference, financial and institutional sustainability plan.

Lead Organization

IBU Architecture, Sarajevo, BiH



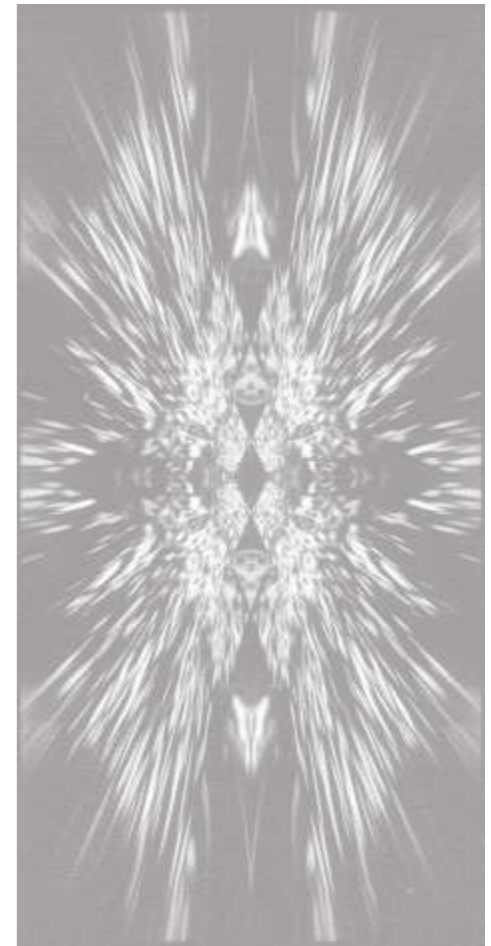
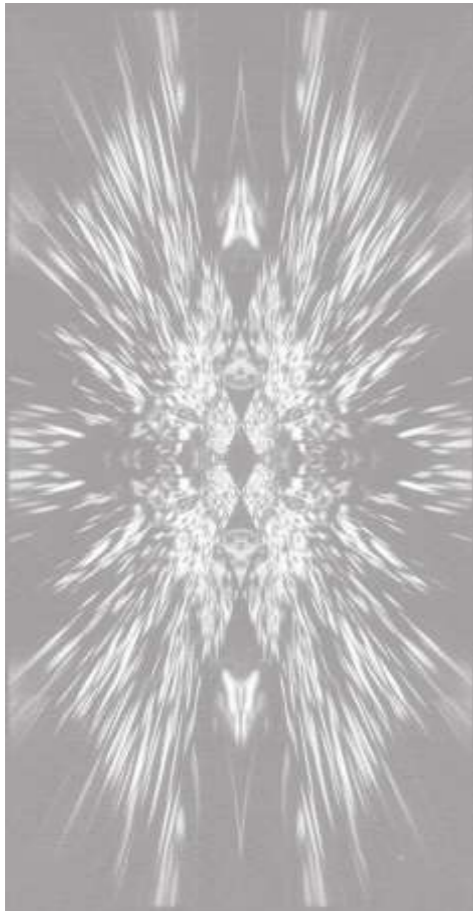
Co - Leader

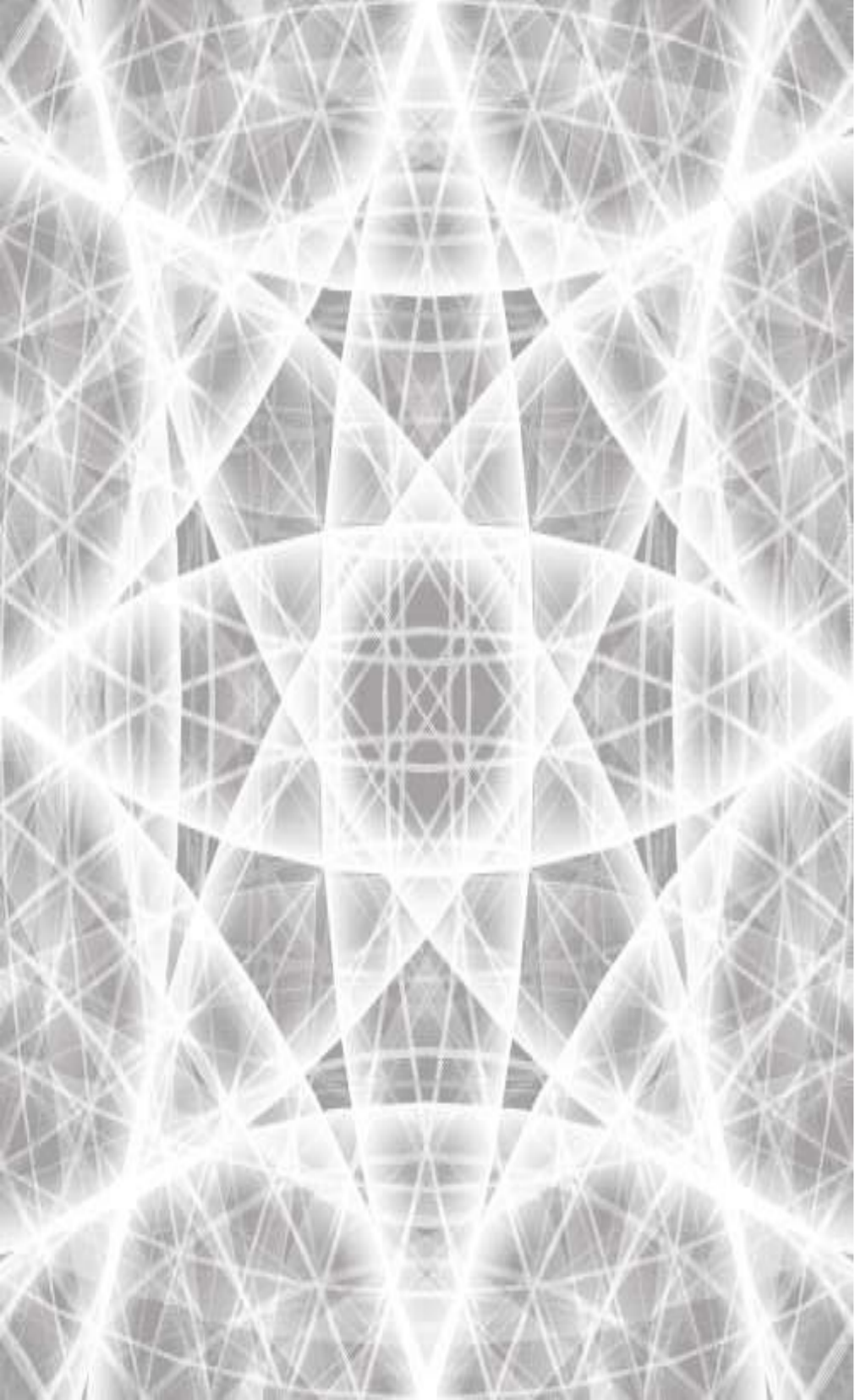
**National University of Architecture and Construction of Armenia
Foundation, NUACA**

WP8 - Project management- led by Ud'A, PM and SC

Lead Organization

**University G. D'Annunzio - Chieti-Pescara,
Italy**





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