



WP5-A5. Pilot RockChain Course implementation for VET students related to ornamental rock industry.



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Transilvania
University
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1. INTRODUCTION

This document presents the results of the WP5-A5 package activities "Pilot RockChain Course implementation for VET students related to ornamental rock industry".

The course was conducted at the Stonemasonry School (KS). The results and materials developed within the project were presented to the students and teachers (~28 people) of the Stonemasonry School.

The successful implementation of the tasks, due to age characteristics and different levels of previously acquired knowledge in economics, economy, stone extraction and use, petrography, required a somewhat more comprehensive introduction so that all participants could follow the video materials.

It was also important to prepare an up-to-date report that includes feedback from participants and photos from the course as a way to check its implementation. Participants, students and teachers, were given a survey to assess the quality of the course held, and also to examine the participants' opinions about the project itself.



2. PILOT COURSE IN KLESARSKA ŠKOLA, PUČIŠĆA

2.1. Agenda

The course took place according to the following agenda:

1. Introductory word of the director about the RockChain project
2. A short lecture on the importance of the circular economy in today's society and the importance for the island of Brač – the islands in the Republic of Croatia are classified as areas of special importance.
3. Video presentation "Application of BlockChain technology in waste management".
4. Discussion of the video presentation I.
5. Video presentation "Final practical exercise: an integrative project".
6. Discussion of the video presentation II.
7. The Director's Final Statement.
8. Conclusion.

2.2. Course content

The course was held on 29.10.2025 starting at 12:00. The course was attended by students of the final grade and some of the students from the lower grades accompanied by their teachers. A total of 28 participants were present.

The director, Tamara Plastić, gave a brief description and set goals of the RockChain project. She emphasized the importance of the circular economy for nature and society, especially local environments where stone is exploited. For the island of Brač, which has an extremely large number of quarries (more than 15) in relation to its area, this is of utmost importance.

She tried to bring the students closer to global issues on a "representative sample", i.e. in a limited area that does not require a great level of abstraction. Since the students have field classes and visited the quarries on the island where the school is located, they were able to very realistically present the importance of proper stone recovery and waste and secondary raw material management in the quarry.

Also, she emphasized the value of all stone fragments that live in the quarry, which are of the same composition as the block that is considered useful in the stone industry, and how all these fragments can be used with good and proper management.

After that, video material with subtitles in Croatian was shown. The seminar was also attended by an English teacher and we checked and compared subtitles with individual professional titles in English.



Course part 1 - BlockChain applied to Waste Management

ROCKCHAIN: Transversal technological skills for the ornamental rock industry focusing on the applicability of blockchain in a circular

2023-1-DE02-KA220-ADU-000166863

Figure 1: Video presentation – 1st part of the course

After the video, a discussion developed. The students asked questions related to the actual use of materials from the quarry. The group that has the subject "Applied Chemistry in Stonemasonry" presented the results of their experiments with stone dust and silt that they mixed with gypsum and glue.

We concluded that we, as a school, are also participating in the circular economy because we use unformatted blocks in our school workshop for carving work that are unusable on machines in primary and secondary production and would otherwise end up as waste.

Course-part 2 - Final Practical Exercise: Integrative Project

After the discussion, the director briefly explained how the tool was developed, i.e. an application in the form of a game through which participants can practice the application of BlockChain technology in the stone industry.

After the introduction, a video of the RockChain unit 5 was projected with a description of the application and instructions for operation and play.



Final practical exercise: integrative project

ROCKCHAIN: Transversal technological skills for the ornamental rock industry focusing on the applicability of blockchain in a circular
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Dobrodošli u RockChain, Jedinica 5.



Figure 2: Video presentation – 2nd part of the course

2.3. Attendance

The course was attended by students of the final grade and some of the students from the lower grades accompanied by their teachers. A total of 28 participants were present in the pilot course, which was attended by students and their teachers in the subjects of English Language, Politics and Economy, Applied Chemistry in Stonemasonry, teachers of the Occupational Safety and Health module, and Administrative and Communication Jobs in Stonemasonry.

Each of the teachers had the task of following the video presentation from their field point of view and commenting after the presentation and answering questions from the student or other colleagues.



Figure 3. Picture.



Figure 4. Picture.



3. QUALITY ASSESSMENT

3.1. EVALUATION QUESTIONNAIRE

The questionnaire that all course participants had to fill out consisted of 14 questions. The aim of the questionnaire was to collect observations on the conducted pilot course.

The questions are presented below.

Feedback questionnaire of RockChain Pilot Course.

TRANSVERSAL TECHNOLOGICAL SKILLS FOR THE ORNAMENTAL ROCK INDUSTRY
FOCUSING ON THE APPLICABILITY OF BLOCKCHAIN IN A CIRCULAR ECONOMY

REFERENCE: 2023-1-DE02-KA220-ADU-000166863

This questionnaire collects feedback about the RockChain pilot course. Your answers are anonymous and will help us improve content, delivery, and user experience across partners. It takes ~5–7 minutes.

tamaraplastic@gmail.com [Promijeni račun](#)



Nije dijeljeno



[Dalje](#)

[Izбриши obrazac](#)



Feedback questionnaire of RockChain Pilot Course.

tamaraplastic@gmail.com [Promijeni račun](#)



Nije dijeljeno

* Označava obavezno pitanje

Attendance and Profile

1. Where did you assist to the course? *

- Spain
- Germany
- Croatia
- Romania

2. Gender: *

- Male
- Female
- Other



3. Role/Background *

- VET student
- VET trainer
- Industry professional (stone/construction/waste)
- Researcher/Academic
- Ostalo: _____

4. How did you attended to the course?

- In person
- Online
- Ostalo: _____

5. Previous familiarity with blockchain and circular economy *

1 2 3 4 5

None High

[Natrag](#)

[Dalje](#)

[Izbrisati obrazac](#)



Feedback questionnaire of RockChain Pilot Course.

tamaraplastic@gmail.com [Promijeni račun](#)



Nije dijeljeno

* Označava obavezno pitanje

Overall Satisfaction

6. Overall, how satisfied were you with the training activity? *

1 2 3 4 5

Not satisfied at all

Very satisfied

7. Would you recommend this pilot activity to your colleagues or classmates?

1 2 3 4 5

Never

Of course

[Natrag](#)

[Dalje](#)

[Izbriši obrazac](#)



Feedback questionnaire of RockChain Pilot Course.

tamaraplastic@gmail.com [Promjjeni račun](#) 

 [Nije djeljeno](#)

* Označava obavezno pitanje

Learning Outcomes

8. To what extent do you agree with the following statements? *

	Fully disagree	Rather disagree	Neither agree nor disagree	Rather agree	Fully agree
The course contents were relevant to my needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I now better understand circular economy principles applied to natural stone and construction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I now better understand the basics of blockchain and its role in traceability and waste management.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I improved my ability to use the RockChain app (navigation, actions, in-round decisions).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The course helped me connect market dynamics, mining challenges, and waste valorization in a realistic way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel more confident to apply what I learned in my studies or job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



9. To what extent did the training activity show the following attributes? *

	Fully disagree	Rather disagree	Neither agree nor disagree	Rather agree	Fully agree
Contents were clearly understandable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contents were interesting and motivating.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Balance between theory and practice was adequate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trainer facilitation and guidance were effective.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning materials/slides were clear and helpful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Platform and technical setup were reliable (access, devices, connectivity).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Timing and pacing were appropriate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The learning environment was inclusive and supportive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Feedback questionnaire of RockChain Pilot Course.

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Nije dijeljeno



RockChain APP

10. Usability of RockChain app during the course



11. How clear were the in-app round mechanics (timer, market, mining, recycling)?



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Nije dijeljeno



* Označava obavezno pitanje

Open Feedback

12. What aspects of the activity did you find most interesting? *

Vaš odgovor

13. Where could it be improved? *

Vaš odgovor

14. Do you have any additional comments, suggestions or opinions about the pilot activity?

Vaš odgovor



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[Natrag](#)

[Podnesi](#)

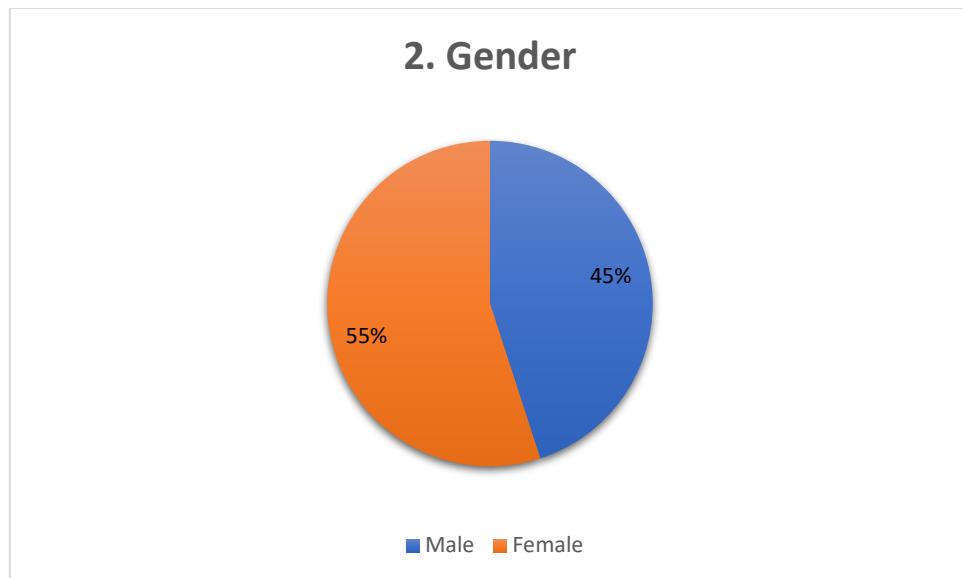
[Izbrisati obrazac](#)

3.2. RESULTS OF THE QUESTIONNAIRE

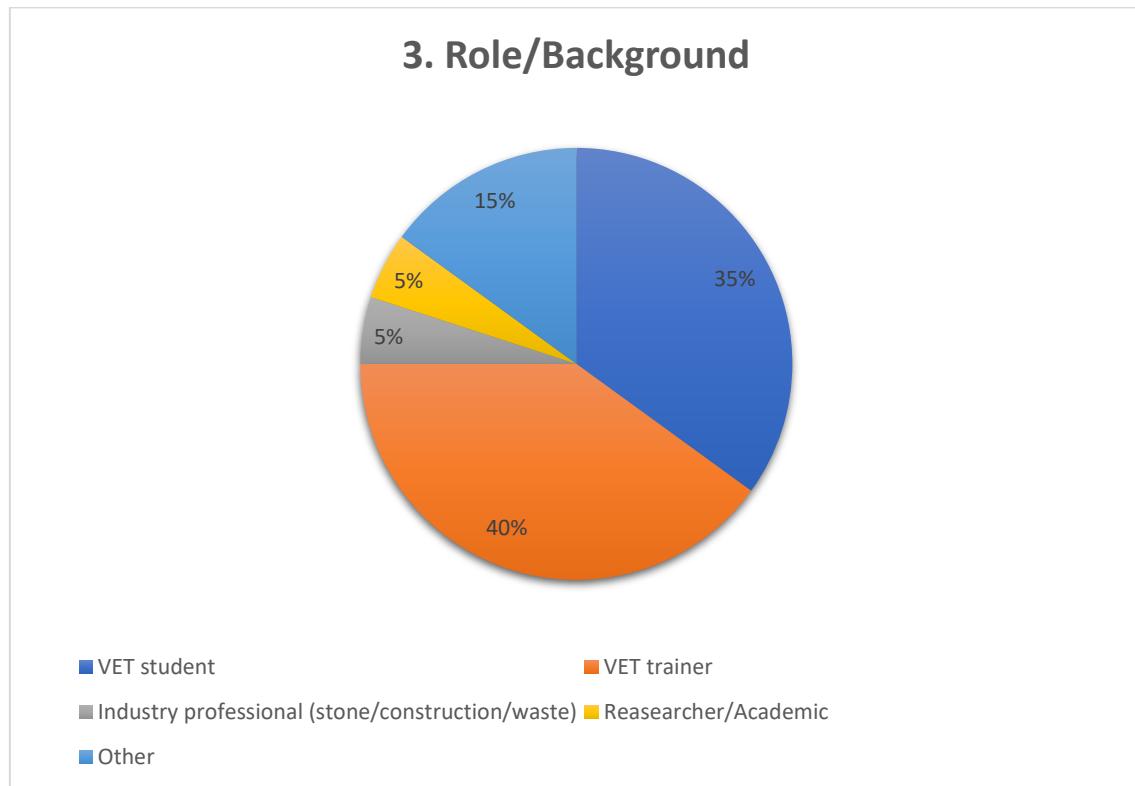
1. Where did you assist to the course?

100% from Croatia.

2. Gender



3. Role/Background





4. How did you attend to the course?

75% in person.

5. Previous familiarity with blockchain and circular economy

Average: 2,65/5

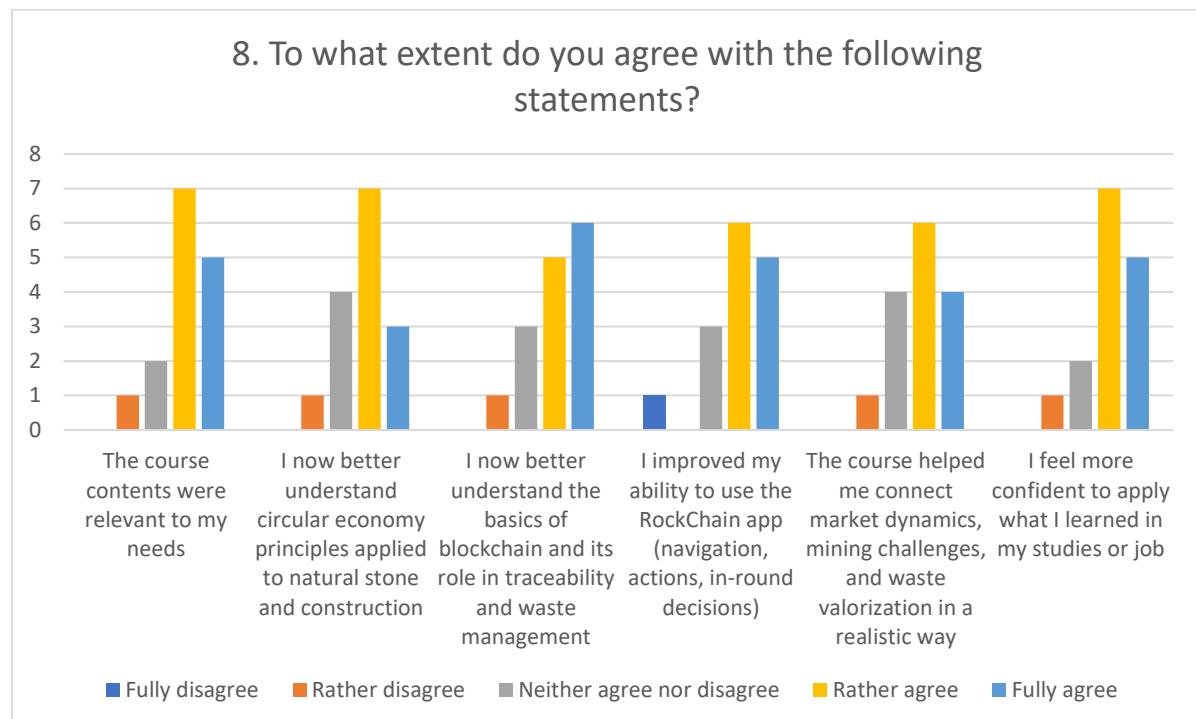
6. Overall, how satisfied were you with the training activity?

Average: 4,25/5

7. Would you recommend this pilot activity to your colleagues or classmates?

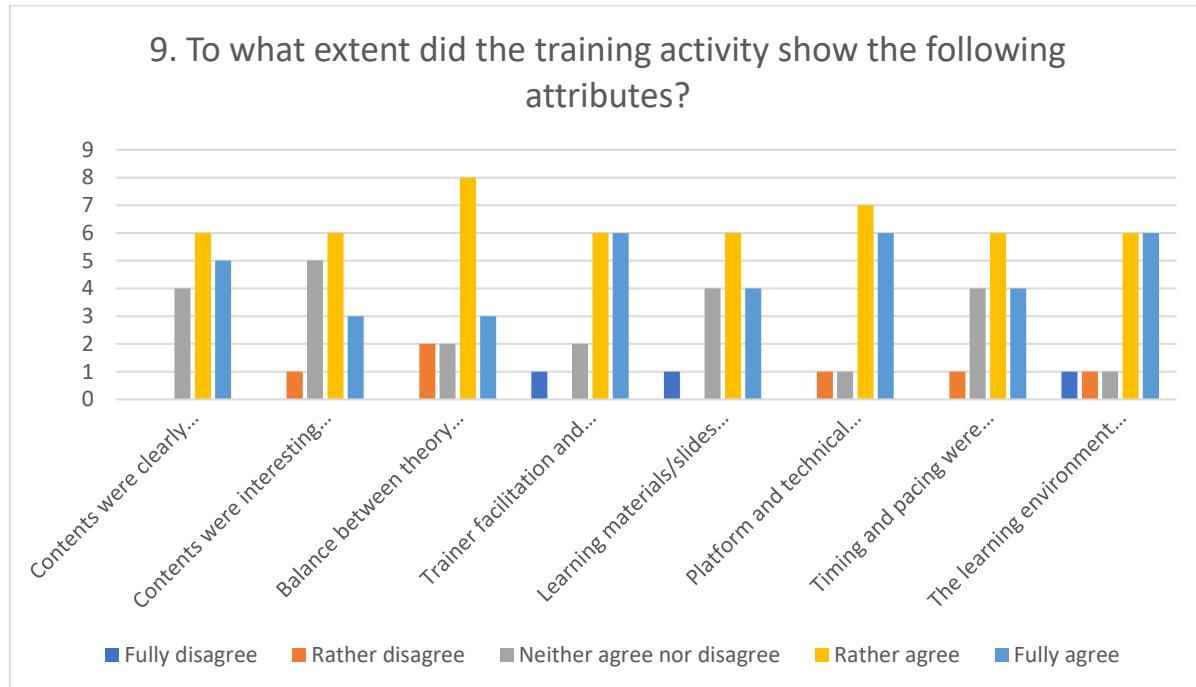
Average: 4,35/5

8. To what extent do you agree with the following statements?





9. To what extent did the training activity show the following attributes?



10. Usability of RockChain app during the course

Average: 3,7/5

11. How clear were the in-app round mechanics (timer, market, mining, recycling)?

Average: 6,95/10

12. What aspects of the activity did you find most interesting?

More information in the conclusions.

13. Where could it be improved?

More information in the conclusions.

14. Do you have any additional comments, suggestions or opinions about the pilot activity?

More information in the conclusions.



4. CONCLUSIONS

The students followed both presentations with clear interest. They actively participated in the discussion, asked questions, and showed strong engagement with the RockChain approach—especially with the application and the way the overall system operates behind the demonstrated game mechanics. Beyond the virtual environment, they also expressed curiosity about the real-world processes that RockChain represents, recognising that the project's core value lies in connecting training with tangible industry challenges such as sustainability, traceability and waste valorisation.

On one hand, a particularly meaningful outcome of the Croatian pilot is that learners perceived RockChain as a bridge between traditional craftsmanship and future-oriented practice. They found it highly motivating that a school rooted in a traditional craft—where stone processing is often learned through hands-on work and manual tools—can participate in a modern, innovative initiative and see how these skills can evolve within new business models and greener value chains in the stone sector. This helped reinforce the message that digitalisation is not a replacement for craft, but a complement that can strengthen quality, accountability, and market relevance.

On the other hand, the pilot also highlighted the importance of positioning VET schools as active contributors to sector transformation rather than passive recipients of innovation. Students valued that their school is not “on the margins”, but takes part in identifying needs, discussing solutions and proposing examples of good practice that can be transferred to companies and future workplaces. In this sense, the course supported both technical learning (circularity, blockchain fundamentals, and waste-management applications) and a broader professional mindset: openness to innovation, confidence in modern tools, and readiness to engage with emerging requirements in the ornamental-stone industry.

In terms of recommended improvements, participant feedback suggests that future editions would benefit from more time for hands-on practice, allowing students to explore the RockChain App and its underlying traceability logic in greater depth and with less time pressure. It would also be valuable to incorporate additional real-life case examples (from quarrying, processing and waste valorisation) so learners can more directly connect game actions with concrete industrial workflows and decision points. Finally, providing a clearer set of step-by-step guidance materials (e.g., short facilitator notes, classroom scenarios, and small practical assignments) would further support replication of the pilot in regular VET teaching contexts and strengthen the transfer from training to workplace practice.