## **O4.A1.** Building the Collaborative Platform.



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#### 1 Introduction

#### 1.1 Brief project description

The BlockWASTE project aims to address the interoperability between waste management and blockchain technology and promote its proper treatment through educational training, so that the data collected will be shared within a safe environment, where there is no room for uncertainty and mistrust between all parties involved. For this purpose, the objectives of BlockWASTE project are as follows:

- To conduct research on solid waste generated in cities and how it is managed, so that it can be used to create an information base of good practices, in order to reintroduce waste into the value chain, promoting the idea of Intelligent Circular Cities.
- To identify the benefits of the Blockchain Technology within the municipal waste management (MSW) process.
- To create a study plan that allows the training of teachers and professionals of organizations and companies of the sector, in the overlap of the fields of Waste Management, Circular Economy and Blockchain Technology.
- To develop an interactive tool based on Blockchain Technology, which will make it
  possible to put into practice the management of data obtained from urban waste, thus
  visualizing the way in which the data is implemented in the Blockchain and enabling
  users to evaluate different forms of management

BlockWASTE aims to implement transnationally new educational contents with the goal of training its students in the partner countries and providing them with the necessary basic skills that allow them to act professionally as future workers in the sector, adding digital competences required by companies that are embracing the process of digital transformation. In this sense, the project is addressed to:

- Enterprises and SMEs, IT professionals, urbanisms and waste management professionals.
- Universities (professors, students and researchers).
- Public bodies

The project includes four Intellectual Outputs as follows:

- O1. Learning materials for interdisciplinary Blockchain-MSW
- O2. European common curriculum on MSW applying Blockchain technologies to Circular Economy strategies
- O3. E-Learning tool based-on Blockchain-MSW focused on Circular Economy
- O4. BlockWASTE Open Educational Resource (OER)

#### 1.2 Objectives of the document

This document presents the results of the Activity O4/A1 "Building the Collaborative Platform.".

The first stage of this Intellectual Output (IO4) builds on the creation of a Collaborative Platform based on previous Erasmus+ projects related to waste management and Blockchain, in order to:







- Establish synergies with those previous experiences.
- Take advantage of the training materials, curriculum and reports that have been carried out.
- Enhance the impact of these previous Erasmus+ projects.

All the collection developed has been compiled in the following report, where you can find projects related to the topics of the project and they are more easily accessible for the user and it is enhanced with the development of this report both the dissemination and the scope of the projects funded by the European Commission.

You can access the collaborative platform by clicking on the following link: <a href="https://blockwasteproject.eu/oer/collaborative-platform/">https://blockwasteproject.eu/oer/collaborative-platform/</a>

### 2 Related projects

#### 2.1 Completed projects

2.1.1 CHEDTEB ("Collaboration in Higher Education for Digital Transformation in European Business")



**Start date:** 01-09-2017

End date: 31-08-2019

**Project Reference:** 2017-1-DE01-KA203-003555

**Eu Grant:** 277.967,00 €

Website: https://erasmus-plus.ec.europa.eu/projects/search/details/2017-1-DE01-KA203-

003555

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Strategic Partnerships for higher education







2.1.2 BlockNet ("BlockChain Network Online Education for interdisciplinary European Competence Transfer")



**Start date: 01-09-2018** 

End date: 28-02-2021

Project Reference: 2018-1-LT01-KA203-047044

**Eu Grant:** 335.924,00 €

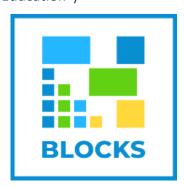
Website: <a href="http://project-blocknet.eu">http://project-blocknet.eu</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Strategic Partnerships for higher education

2.1.3 BLOCKS ("Blockchain for Entrepreneurs - a non-traditional Industry 4.0 curriculum for Higher Education")



**Start date:** 01-09-2018

**End date:** 31-08-2021

**Project Reference:** 2018-1-RO01-KA203-049510

**Eu Grant:** 350.020,00 €

Website: <a href="https://projectblocks.ro/">https://projectblocks.ro/</a>







practices

Action type: Strategic Partnerships for higher education

2.1.4 WaMPPP ("Waste management curricula development in partnership with

public and private sector")



Start date: 15-10-2015

End date: 14-10-2018

Project Reference: 561821-EPP-1-2015-1-RS-EPPKA2-CBHE-JP

**Eu Grant:** 833.084,00 €

Website: <a href="http://www.wamppp.com/">http://www.wamppp.com/</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Capacity Building in higher education

2.1.5 BLISS ("Blockchain skills for ICT professionals")



**Start date:** 01-10-2017

**End date:** 31-03-2020

Project Reference: 2017-1-FR01-KA202-037259

**Eu Grant:** 360.625,00 €

Website: <a href="http://blockchain.univ-lyon1.fr/">http://blockchain.univ-lyon1.fr/</a>







practices

Action type: Strategic Partnerships for vocational education and training

2.1.6 DLT4ALL ("A Knowledge Alliance for Blockchain in Academic, Entrepreneurial and Investment Training")



**Start date:** 01-11-2018

End date: 31-10-2021

Project Reference: 601063-EPP-1-2018-1-CY-EPPKA2-KA

**Eu Grant:** 990.680,00 €

Website: https://dlt4all.eu/

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Knowledge Alliances for higher education

2.1.7 DESING 4 CIRCLE ("Innovative design practices for achieving a new textile circular sector")



Start date: 01-12-2018

**End date:** 28-02-2021

**Project Reference:** 2018-1-LV01-KA202-046977

Eu Grant: 298.241,00 €

Website: <a href="https://design4circle.eu/">https://design4circle.eu/</a>







practices

Action type: Strategic Partnerships for vocational education and training

#### 2.1.8 Ice-cap ("Waste Not Want Not")



Start date: 01-09-2019

End date: 30-11-2021

Project Reference: 2019-1-UK01-KA204-061444

**Eu Grant:** 240.333,00 €

Website: https://ice-cap.eu/

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

**Action type:** Strategic Partnerships for adult education

#### 2.1.9 EduZWaCE ("Education for Zero Waste and Circular Economy")



**Start date:** 01-10-2018

End date: 30-09-2020

Project Reference: 2018-1-EL01-KA202-047749

Eu Grant: 230.840,00 €

Website: <a href="https://www.eduzwace.eu/index.php/home">https://www.eduzwace.eu/index.php/home</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices







Action type: Strategic Partnerships for vocational education and training

#### 2.1.10 TRANSITION ("fosTeR blockchAiN acquiSITIon fOr eNtrepreneurs")



**Start date: 01-11-2019** 

End date: 31-12-2021

Project Reference: 2019-1-MT01-KA202-051255

**Eu Grant:** 216.638,00 €

Website: <a href="https://www.transition-project.eu/">https://www.transition-project.eu/</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Strategic Partnerships for vocational education and training

#### 2.1.11 CEED ("Circular Economy into Art through Eco-Design")



**Start date:** 07-12-2019

End date: 06-12-2021

Project Reference: 608327-EPP-1-2019-1-AL-EPPKA2-CBY-WB

**Eu Grant:** 96.698,00 €







Website: <a href="http://ceed-erasmusplus.com">http://ceed-erasmusplus.com</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

**Action type:** Capacity Building for youth in neighbouring and enlargement countries

2.1.12 CircularStart ("Circular Start into Business")



**Start date:** 01-11-2019

**End date:** 31-10-2021

Project Reference: 2019-1-ES01-KA202-065625

**Eu Grant:** 182.041,00 €

Website: <a href="http://www.circularstart.eu/">http://www.circularstart.eu/</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Strategic Partnerships for vocational education and training

2.1.13 FAMILY CIRCLE ("Family Learning To Drive Demand for A Circular Economy")



**Start date:** 01-09-2019

End date: 31-01-2022

**Project Reference:** 2019-1-SE01-KA204-060375

**Eu Grant:** 269.979,00 €







Website: <a href="https://familycircleproject.eu/en/">https://familycircleproject.eu/en/</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Strategic Partnerships for adult education

#### 2.1.14 SkillCircle ("Skills for transition to circular economy")



Start date: 01-09-2017

End date: 30-09-2019

Project Reference: 2017-1-SE01-KA202-034569

**Eu Grant:** 199.505,00 €

Website: <a href="https://skillcircle.eu/">https://skillcircle.eu/</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Strategic Partnerships for adult education

#### 2.1.15 CircleVET ("Exploring the Educational Potential of Circular Economy")



**Start date:** 01-10-2018

End date: 30-09-2020

**Project Reference:** 2018-1-DE02-KA202-005022

**Eu Grant:** 133.024,00 €

Website: <a href="http://circlevet.eu/">http://circlevet.eu/</a>







practices

Action type: Strategic Partnerships for vocational education and training

#### 2.1.16 EcoCircle



**Start date:** 01-02-2018

End date: 30-04-2019

Project Reference: 2017-3-LV02-KA205-001893

**Eu Grant:** 33.280,00 €

Website: <a href="https://www.facebook.com/ProjectEcoCircle/">https://www.facebook.com/ProjectEcoCircle/</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Strategic Partnerships for youth

2.1.17 CICLO ("boosting the Circular eConomy skills of the EU services Labor fOrce")



**Start date:** 01-10-2019

End date: 30-09-2021

Project Reference: 2019-1-SK01-KA202-060689

**Eu Grant:** 258.011,00 €

Website: <a href="http://ciclo-project.eu/">http://ciclo-project.eu/</a>







practices

Action type: Cooperation partnerships in vocational education and training

#### 2.1.18 Zero Waste



**Start date:** 01-06-2018

End date: 31-05-2019

**Project Reference:** 2018-1-IT02-KA104-047115

**Eu Grant:** 3.518,00 €

Website: https://www.beginblockchain.eu/

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Learning Mobility of Individuals

#### 2.2 Projects in progress

#### 2.2.1 BEGIN ("Blockchain Enabling Growth in New Enterprises")



Start date: 01-12-2020

End date: 30-11-2022

**Project Reference:** 2020-1-UK01-KA202-078932

**Eu Grant:** 293.017,00 €







Website: <a href="https://www.beginblockchain.eu/">https://www.beginblockchain.eu/</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Strategic Partnerships for vocational education and training

2.2.2 S.M.S ("Smart Waste Management for Smarter Cluster Schools")



**Start date: 01-10-2020** 

End date: 31-08-2022

**Project Reference:** 2020-1-RO01-KA229-079971

**Eu Grant:** 170.100,00 €

Website: https://sms-erasmus.eu/

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

**Action type:** School Exchange Partnerships

2.2.3 TRACK ("Training for Agrifood Competences on Blockchain")



**Start date:** 01-10-2020

End date: 30-09-2022

Project Reference: 2020-1-HR01-KA202-077805







**Eu Grant:** 148.297,00 €

Website: Not available → <a href="https://erasmus-plus.ec.europa.eu/projects/search/details/2020-1-">https://erasmus-plus.ec.europa.eu/projects/search/details/2020-1-</a>

HR01-KA202-077805

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Strategic Partnerships for vocational education and training

2.2.4 BLAST! ("Fostering Youth Social Inclusion through Blockchain for Sustainability")



Start date: 01-03-2021

End date: 28-02-2023

Project Reference: 2020-3-IE01-KA205-082899

**Eu Grant:** 257.161,00 €

Website: http://blast-euproject.com/

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Strategic Partnerships for youth

2.2.5 DESUWOW's ("DEvelopment of professional Skills for the use of Urban solid Wastes and Organic Wastes in agricultural")



**Start date:** 01-11-2020

**End date:** 31-10-2022

Project Reference: 2020-1-UK01-KA202-079054

**Eu Grant:** 167.954,00 €

Website: <a href="https://desuwow.com/">https://desuwow.com/</a>







practices

Action type: Strategic Partnerships for vocational education and training

#### 2.2.6 TRUE- ("Transparency of Learning Outcomes through Blockchain Technology")



**Start date: 01-11-2020** 

End date: 30-06-2023

Project Reference: 2020-1-PT01-KA203-078421

**Eu Grant:** 395.104,00 €

Website: <a href="https://trueproject.eu/">https://trueproject.eu/</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

**Action type:** Strategic Partnerships for higher education

#### 2.2.7 CEIP ("Circular Economy In Practice")



**Start date:** 01-09-2020







End date: 31-08-2023

Project Reference: 2020-1-ES01-KA204-082082

Eu Grant: 214.658,00 €

Website: <a href="http://www.ceip.uji.es">http://www.ceip.uji.es</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Strategic Partnerships for adult education

2.2.8 Design4climate ("Addressing Climate Change through Design Thinking for a Green, no Waste Economy")



**Start date: 01-10-2020** 

End date: 31-12-2022

Project Reference: 2020-1-PL01-KA202-081910

Eu Grant: 214.658,00 €

Website: https://design4climate.e-ce.uth.gr/#/

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Strategic Partnerships for vocational education and training

2.2.9 LifeCircularCanvas ("Circular Thinking in Action - New skills for young adults through circular business models and digital storytelling")



**Start date:** 01-11-2019

End date: 30-06-2022







Project Reference: 2019-1-SE01-KA204-060527

Eu Grant: 258.416,00 €

Website: <a href="https://livecircularcanvas.eu/en">https://livecircularcanvas.eu/en</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Strategic Partnerships for adult education

# 2.2.10 CROCEMS ("Collaborative RObotics for Circular Economy in Manufacturing Sectors")



**Start date:** 28-02-2022

End date: 27-02-2025

Project Reference: 2021-1-ES01-KA220-VET-000034799

**Eu Grant:** 380.280,00 €

Website: <a href="https://erasmus-plus.ec.europa.eu/projects/search/details/2021-1-ES01-KA220-VET-">https://erasmus-plus.ec.europa.eu/projects/search/details/2021-1-ES01-KA220-VET-</a>

000034799

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Cooperation partnerships in vocational education and training

2.2.11 ECO-CENT ("Innovation Ecosystems for Circular Economy Entrepreneurs")



**Start date:** 01-11-2021







End date: 31-10-2023

Project Reference: 2021-1-PT01-KA220-VET-000033190

**Eu Grant:** 228.766,00 €

Website: https://eco-cent.eu/

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Cooperation partnerships in vocational education and training

2.2.12 Green Growth ("Green Growth Competences to face the circular economy challenge in the building sector")



**Start date: 15-11-2020** 

End date: 14-05-2023

Project Reference: 2020-1-ES01-KA202-083246

**Eu Grant:** 287.841,00 €

Website: <a href="https://greengrowthproject.eu/">https://greengrowthproject.eu/</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

**Action type:** Cooperation partnerships in vocational education and training

2.2.13 Building green skills for circular economy



Start date: 01-11-2021







End date: 31-10-2023

Project Reference: 2021-1-NL01-KA210-ADU-000033999

**Eu Grant:** 60.000,00 €

Website: <a href="http://circular-skills.org">http://circular-skills.org</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

**Action type:** Small-scale partnerships in adult education

#### 2.2.14 EWaste Learning Paths



**Start date:** 01-12-2021

End date: 30-11-2023

Project Reference: 2021-1-PT01-KA210-SCH-000027311

**Eu Grant:** 60.000,00 €

Website: <a href="https://www.projectewaste.com/">https://www.projectewaste.com/</a>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

**Action type:** Small-scale partnerships in school education







2.2.15 CircularBIM ("Educational platform focused on advanced strategies of reinstatement of building materials in the industrial value chain to promote the transition to the circular economy through the use of BIM learning technologies")



**Start date: 01-09-2019** 

End date: 31-08-2022

Project Reference: 2019-1-ES01-KA203-065962

Eu Grant: 224.240,00 €

Website: https://circularbim.eu/en/

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Strategic Partnerships for higher education

2.2.16 BC4ECO ("Blockchain for the Environment: Open Interdisciplinary Education on Generating Disruptive Change through Impactful DLT Applications")

**Start date:** 01-02-2022

**End date:** 31-01-2025

**Project Reference:** 2021-1-DK01-KA220-HED-000027608

**Eu Grant:** 377.079,00 €

Website: Not available → <a href="https://erasmus-plus.ec.europa.eu/projects/search/details/2021-1-">https://erasmus-plus.ec.europa.eu/projects/search/details/2021-1-</a>

DK01-KA220-HED-000027608

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

**Action type:** Cooperation partnerships in higher education







2.2.17 Development of Courses for Sustainable Waste Management for Municipalities

**Start date:** 01-01-2022

End date: 31-12-2023

**Project Reference:** 2021-1-PL01-KA220-VET-000030417

**Eu Grant:** 336.380,00 €

Website: Not available → <a href="https://erasmus-plus.ec.europa.eu/projects/search/details/2021-1-">https://erasmus-plus.ec.europa.eu/projects/search/details/2021-1-</a>

PL01-KA220-VET-000030417

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good

practices

Action type: Cooperation partnerships in vocational education and training