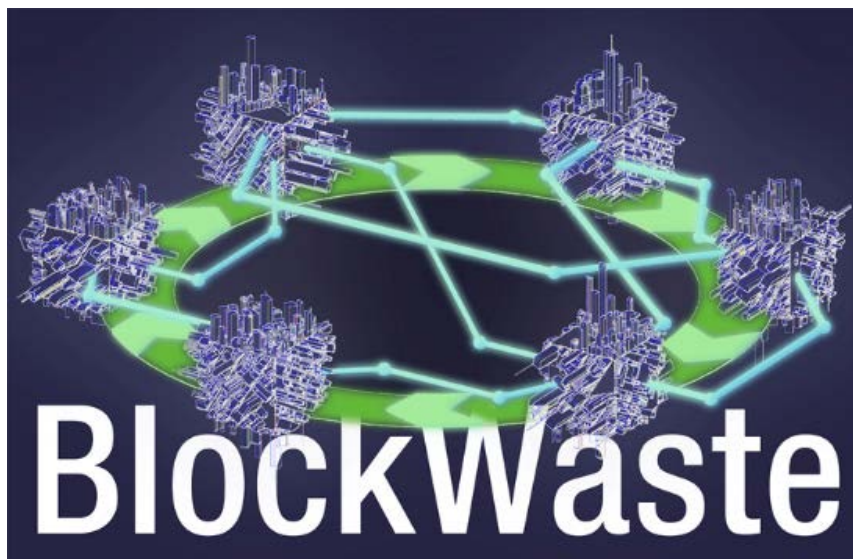


O4.A1 Building the Collaborative Platform



[Disclaimer](#)

This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Co-funded by the
Erasmus+ Programme
of the European Union

Output factsheet:

Funding Programme	Erasmus+ Programme of the European Union
Funding NA	EL01 Greek State Scholarship's Foundation (IKY)
Project full title	Innovative training based on Blockchain technology applied to waste management - BLOCKWASTE
Field	KA2 - Cooperation for innovation and the exchange of good practices KA203 - Strategic Partnerships for higher education
Project Number	2020-1-EL01-KA203-079154
Project Duration	24 months
Project Start Date	01-10-2020
Project End Date:	30-09-2022

Output details:

Output title: O4: BlockWASTE Open Educational Resource (OER)

Task Title: A1 - Building the Collaborative Platform

Output leader: CTM

Task leader: CTM

Author(s): Rainer Lenz, rlenz@fh-bielefeld.de, Bielefeld UAS, Germany, Christa Barkel, Saxion UAS, c.barkel@saxion.nl, Netherlands, Maria Menegaki, National Technical University of Athens, menegaki@metal.ntua.gr, Greece, Viktoria Voronova, Tallinn University of Technology, viktor.voronova@taltech.ee, Estonia, David Caparros Perez, Centro Tecnológico del Mármol, Piedra y Materiales, david.caparros@ctmarmol.es, Spain

Reviewed by: Athanassios Mavrikos, National Technical University of Athens, mavrikos@metal.ntua.gr, Greece

Document Control

Document version	Version	Amendment
V0.1	28/02/2022	Final Version – 31/03/2022

Contents

Executive Summary	iii
1 Introduction	1
1.1 Brief project description.....	1
1.2 Objectives of the document.....	1
2 Related projects	2
2.1 Completed projects.....	2
2.1.1 CHEDTEB (“Collaboration in Higher Education for Digital Transformation in European Business”)	2
2.1.2 BlockNet (“BlockChain Network Online Education for interdisciplinary European Competence Transfer”).....	3
2.1.3 BLOCKS (“Blockchain for Entrepreneurs - a non-traditional Industry 4.0 curriculum for Higher Education”).....	4
2.1.4 WaMPPP (“Waste management curricula development in partnership with public and private sector”).....	4
2.1.5 BLISS (“Blockchain skills for ICT professionals”).....	5
2.1.6 DLT4ALL (“A Knowledge Alliance for Blockchain in Academic, Entrepreneurial and Investment Training”)	5
2.1.7 DESING 4 CIRCLE (“Innovative design practices for achieving a new textile circular sector”).....	6
2.1.8 Ice-cap (“Waste Not Want Not”).....	6
2.1.9 EduZWaCE (“Education for Zero Waste and Circular Economy”)	7
2.1.10 TRANSITION (“fosTeR blockchAiN acquiSiTion fOr eNtreprenuers”).....	7
2.1.11 CEED (“Circular Economy into Art through Eco-Design”).....	8
2.1.12 CircularStart (“Circular Start into Business”).....	8
2.1.13 FAMILY CIRCLE (“Family Learning To Drive Demand for A Circular Economy”)....	9
2.1.14 SkillCircle (“Skills for transition to circular economy”).....	9
2.1.15 CircleVET (“Exploring the Educational Potential of Circular Economy”).....	10
2.1.16 EcoCircle	10
2.1.17 CICLO (“boosting the Circular economy skills of the EU services Labor fOrce”)11	
2.1.18 Zero Waste	11
2.2 Projects in progress.....	12
2.2.1 BEGIN (“Blockchain Enabling Growth in New Enterprises”)	12
2.2.2 S.M.S (“Smart Waste Management for Smarter Cluster Schools”)	12
2.2.3 TRACK (“Training for Agrifood Competences on Blockchain”)	13

2.2.4	BLAST! (“Fostering Youth Social Inclusion through Blockchain for Sustainability”)	13
2.2.5	DESUWOW's (“DEvelopment of professional Skills for the use of Urban solid Wastes and Organic Wastes in agricultural”)	14
2.2.6	TRUE- (“Transparency of Learning Outcomes through Blockchain Technology”)	14
2.2.7	CEIP (“Circular Economy In Practice”)	15
2.2.8	Design4climate (“Addressing Climate Change through Design Thinking for a Green, no Waste Economy”)	15
2.2.9	LifeCircularCanvas (“Circular Thinking in Action - New skills for young adults through circular business models and digital storytelling”)	16
2.2.10	CROCEMS (“Collaborative RObotics for Circular Economy in Manufacturing Sectors”)	16
2.2.11	ECO-CENT (“Innovation Ecosystems for Circular Economy Entrepreneurs”)	17
2.2.12	Green Growth (“Green Growth Competences to face the circular economy challenge in the building sector”)	17
2.2.13	Building green skills for circular economy	18
2.2.14	EWaste Learning Paths	18
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”)	19
2.2.16	BC4ECO (“Blockchain for the Environment: Open Interdisciplinary Education on Generating Disruptive Change through Impactful DLT Applications”)	19
2.2.17	Development of Courses for Sustainable Waste Management for Municipalities.	20

Executive Summary

The present document deals with the results of the activity O4.A1 “Building the Collaborative Platform”. Firstly, a number of previous Erasmus+ projects related to waste management and Blockchain is being presented. The analysis of these projects can help to establish synergies, build on the training material and curricula that have already been developed as well as enhance the impact of these projects. The material is compiled in the report hereinafter and the platform is accessible in the following link: <https://blockwasteproject.eu/oer/collaborative-platform/>



Co-funded by the
Erasmus+ Programme
of the European Union



1 Introduction

1.1 Brief project description

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)

This document is exclusively in English as it is not the main result of Output 4, which is the OER. The OER is available in all languages of the project partners.

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:
<https://blockwasteproject.eu/oer/collaborative-platform/>



Co-funded by the
Erasmus+ Programme
of the European Union



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



Co-funded by the
Erasmus+ Programme
of the European Union



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: <http://project-blocknet.eu>

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

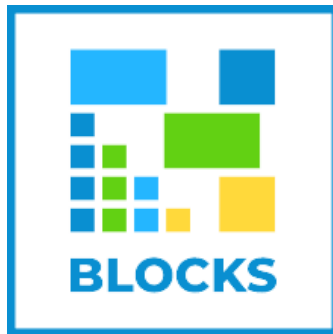
Action type: Strategic Partnerships for higher education



Co-funded by the
Erasmus+ Programme
of the European Union



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: <https://projectblocks.ro/>

Programme: Erasmus+Key Action: Cooperation for innovation and the exchange of good 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: <http://www.wamppp.com/>

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

Action type: Capacity Building in higher education



Co-funded by the
Erasmus+ Programme
of the European Union



2.1.5 BLISS (“Blockchain skills for ICT professionals”)



BLISS project

Start date: 01-10-2017

End date: 31-03-2020

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

Eu Grant: 360.625,00 €

Website: <http://blockchain.univ-lyon1.fr/>

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



Co-funded by the
Erasmus+ Programme
of the European Union



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: <https://design4circle.eu/>

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



Co-funded by the
Erasmus+ Programme
of the European Union



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

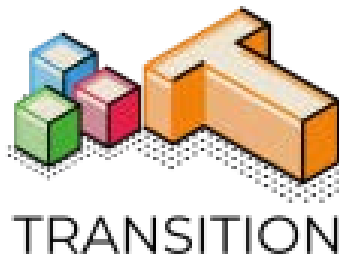
Eu Grant: 230.840,00 €

Website: <https://www.eduzwace.eu/index.php/home>

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: <https://www.transition-project.eu/>

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

Action type: Strategic Partnerships for vocational education and training



Co-funded by the
Erasmus+ Programme
of the European Union



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: <http://ceed-erasmusplus.com>

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: <http://www.circularstart.eu/>



Co-funded by the
Erasmus+ Programme
of the European Union



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: <https://familycircleproject.eu/en/>

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: <https://skillcircle.eu/>



Co-funded by the
Erasmus+ Programme
of the European Union



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: <http://circlevet.eu/>

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



Co-funded by the
Erasmus+ Programme
of the European Union



Website: <https://www.facebook.com/ProjectEcoCircle/>

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: <http://ciclo-project.eu/>

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



Co-funded by the
Erasmus+ Programme
of the European Union



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: <https://www.beginblockchain.eu/>

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 €



Co-funded by the
Erasmus+ Programme
of the European Union



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: <https://erasmus-plus.ec.europa.eu/projects/search/details/2020-1-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



Co-funded by the
Erasmus+ Programme
of the European Union



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: <https://desuwow.com/>

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



Co-funded by the
Erasmus+ Programme
of the European Union



Website: <https://trueproject.eu/>

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: <http://www.ceip.uji.es>

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/#/>



Co-funded by the
Erasmus+ Programme
of the European Union



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: <https://livecircularcanvas.eu/en>

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 €



Co-funded by the
Erasmus+ Programme
of the European Union



Website: <https://erasmus-plus.ec.europa.eu/projects/search/details/2021-1-ES01-KA220-VET-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 €



Co-funded by the
Erasmus+ Programme
of the European Union



Website: <https://greengrowthproject.eu/>

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

Action type: Cooperation partnerships in vocational education and training

2.2.13 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: <http://circular-skills.org>

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

Action type: Small-scale partnerships in adult education

2.2.14 E-Waste Learning Paths



Start date: 01-12-2021

End date: 30-11-2023

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



Co-funded by the
Erasmus+ Programme
of the European Union



Eu Grant: 60.000,00 €

Website: <https://www.projectewaste.com/>

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



Co-funded by the
Erasmus+ Programme
of the European Union



Eu Grant: 377.079,00 €

Website: <https://erasmus-plus.ec.europa.eu/projects/search/details/2021-1-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: <https://erasmus-plus.ec.europa.eu/projects/search/details/2021-1-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



Co-funded by the
Erasmus+ Programme
of the European Union

