

# Development of an Innovative Insulation Fire Resistant Façade from the Construction and Demolition Waste

# DEFEAT

INTEGRATED/0918/0052

# **DELIVERABLE D1.2**

# PROJECT MANAGEMENT PLAN







The Project DEFEAT (INTEGRATED/0918/0052) has been co-funded by the European Regional Development Fund (ERDF) and the Cyprus Government, through the RESTART 2016-20 framework program of the Cyprus Research & Innovation.Foundation

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#### **DELIVERABLE INFORMATION**

<b>DELIVERABLE N°</b>	1.2
DELIVERABLE TITLE	Project Management Plan
WP NO.	1
WP LEADER	FRC
NATURE	Report
CONTRACTUAL DEADLINE	M2 - 31.08.2020
<b>DELIVERY DATE TO RIF</b>	31/03/2021

#### **DISSEMINATION LEVEL**

PU	Public	$\checkmark$
CO	Confidential, only for the members of the consortium (incl. RIF Services)	







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## 1. Introduction

Globally, construction and infrastructure industries are in full swing to cope with burgeoning populace. Whilst construction is highly classed as the pillar industry for materializing the built environment, it is also a key culprit for contributing to environmental degradation. Nowadays, older structures are being replaced by the new-fangled ones ensuing into the wastes of construction and demolition (CDW). These CDW have cropped up as a specific by-product of construction activities escorting to pollution of environments when dumped to open lands. The term CDW, also plainly known as construction waste, refers to the solid wastes generated during activities viz., construction, renovation, and demolition. CDW have turned out to be one of the most momentous waste flows, which accounts for 30% - 40% of the entire urban waste generation. The European Waste Catalogue [EWC] classifies CDW into various categories such as concrete, bricks, tiles, ceramics, woods, glasses, plastics, soil and stones. Today, the dilemma of CDW has exacerbated on account of gigantic construction and demolition activities. For instance, merely European Union [EU] has generated 800 million tons of CDW in 2014, accounting for over half of total UK municipal solid waste (MSW). The disposal of the referred wastes in open lands is a common practice creating a great predicament of landfilling, which in turn, not only gives rise to negative social-economic impacts along with shortage of open spaces, but also leads to environmental degradation due to anaerobic decay of the dumped materials generating carbon dioxide, methane and leachate. The gargantuan generation of CDW is answerable for not merely swift exhaust of precious land spaces but also for a series of pessimistic impacts on society and environment like land occupation, raw material consumption, energy burning up, contamination of waters and the emission of greenhouse gas (GHG). In Cyprus, the CDW disposal management seems to be underperforming, despite the fact that a comprehensive legislative framework relating to their management to dispose of, is in place since 2011. The referred deficiency can be attributed to numerous reasons, viz., the general lack of skills and knowledge to systematize effective CDW disposal management systems and also to the fact that the cost of recovery activities is higher than the prices of the current recycled endproducts. Apart from plastic, metal and paper, there are no noteworthy recycling technologies to

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be applied for the CDW in order to upsurge the salvage value of the building. There exists a great potential for recycling and reusing CDW materials since some components have high resource value, however, the present systems necessitate the waste to be sorted manually, which is only effective with large particles. Finally, the valorisation of waste concrete and ceramics is difficult if the materials are full with impurities besides other materials.

These have altogether pushed researchers and practitioners to manage CDW effectively and methodically. One of the key strategies which can be adopted is to advocate circular economy (CE) practices. A CE aims at extracting the maximum value from resources and minimizing waste and pollutions. It serves as the alternative to the conventional 'take-make-use-dispose' economic development system, so-called linear economy, which has piloted to severe environmental deterioration, either by removing natural capital from the environment or by reducing the value of the stock of natural assets via waste-connected pollution. A CE is intertwined with the well-known '3R' principles, i.e. Reduce, Reuse and Recycle, which are ranked in a hierarchy according to their desirability.

What's more, over the last decade, the European constructions as well as the rehabilitation activities have picked up the pace as a broad-spectrum call for accommodations to facilitate the growing population. At this stage, a study should be taken into account which was carried out by the 28 Member States of the European Union, that the high rate of energy consumption over the past twenty years (250-300 Mtoe) is attributed to building requirements for heating, cooling and ventilation owing to their substandard thermal insulation.

Despite this great dilemma, the majority of construction works are going on without any concern for it. However, during the recent years, the safety concern of such infrastructures has compelled to draw increasing attention especially in the incidents of fires. The mindset is now transformed because of a series of catastrophic fires that have taken place in the last few years, such as in U.K., the Grenfell Tower in London (2017) and the Mandarin hotel, U.K. (2018), in the eastern Attica, Greece (Mati) and in France which caused human casualties, major structural damages and serious consequences for the regional economies which in turn, adversely affected European

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economy. It has been unearthed that the incidents of these catastrophic fires in Europe have been escalated by the tragic percentage of greater than 300% during 2010 to 2015. At the same time, the current market thermal insulation solutions represent materials that are either combustible, or undergo spalling phenomena when heated due to fire incidents (such as cement based materials), or higher costing materials, or materials with high impact on environment during their production process.

As of now, a ray of hope to all above crises has emerged in the form of the novel, cost-effective, innovative Geopolymer technology. It has offered a systematic solution to prevailing concerns in this regard. On the top of that, the exothermic process of Geopolymerisation is found with lower environmental footprint (at least 40%) than the present cement industry. It is based on the synthesis of inorganic polymers, which are formed after mixing two components, i.e. an alumino-silicate solid precursor and an alkaline activating solution at atmospheric pressure, resulting in a paste that can set and harden at room temperature. Geopolymer technology has exhibited several advantages including the ability to employ waste raw materials for the new material production which is of prime interest for the DEFEAT project.

Lightweight prefabricated panels are extensively employed for construction and refurbishment activities. The application of these building elements in constructions has proved with scores of pros. Their light weight simplifies the handling of the panels and slims down the dead load of buildings. By specialising the design of these panels for rapid assembly and insulation, they remarkably shrink the construction time and enhance the acoustic and thermal performances of the buildings. Not merely have that, owing to the reduce in the quantity of required materials and by making a boost in the potential for recycled waste, lightweight building elements can mitigate the embodied energy and carbon footprint of buildings. Many studies have been conducted on developing lightweight concrete and composites for non-structural and structural building components. Geopolymer foams have been explored as a core of lightweight sandwich panels. For decades, lightweight concrete has been investigated as a potential fire-resistant building

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component; with its so many advantages such as high durability, long span of service life and low cost.

The optimization of the density of the DEFEAT material will be achieved by means of chemical and mechanical methods while the production will be held by a conventional technique and 3D-printing. Furthermore, the ultimate products will be evaluated in terms of properties such as thermal, mechanical, fire resistance, along with financial costing so as to permit for their full market potential and uptake within 3 years subsequent to the end of the project. Apart from the above, at the end of the project and after the successful application of the separation method and the development of the innovative material, an endeavour will be made to establish a framework for utilizing CDW as a raw material in the building industry by the public partners of the consortium.







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## 2. Objectives of DEFEAT Project

The "Development of an innovative insulation fire resistant façade from the Construction and Demolition Waste" (DEFEAT) project rose in an attempt to tackle the aforementioned issues. DEFEAT (INTEGRATED/0918/0052) is co-funded by the European Regional Development Fund and the Republic of Cyprus through the Research & Innovation Foundation and it envisions to develop a pilot scale of an innovative separation method for CDW, develop a composite material also generated from CDW that will be characterized by low thermal conductivity, satisfactory mechanical properties, and fire resistance properties. The produced material will be able to be applied as a façade, either on existing or new construction projects. The project's scientific and technical objectives are listed below:

### **2.1 Scientific Objectives**

- Utilization of the image processing technology for the optimization of the CDW separation in Cyprus.
- The consumption of 100% CDW as raw material for the material development.
- The modification of the synthesis in order to achieve the fire resistance and validation of the developed material according to relevant standard.
- The reduction of the material density with chemical (hydrogen peroxide, aluminium powder) and mechanical methods (lightweight aggregate, cenospheres) and the validation of the thermal conductivity according to relevant standard.
- The design of the compact material. With a view to achieve the elimination of the fire spread and the porous structure which will gain the low thermal conductivity and density, the final output will be a sandwich type consisting of slim compact layers covering the porous part.
- The properties engineering for the 3D production of the materials.
- Analysis of the data collected through the social platform and produce meaningful reports.
- Produce scientific publications for peer-reviewed journals and/or conferences.







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## 2.2 Technical Objectives

- The application of the image processing technology mentioned above on an already existed • sorting line for waste separation in Cyprus.
- The production of recycled aggregates for the concrete industry. •
- The pilot production of the composite material. •
- The pilot application of the materials in a demo-building or demo-wall. The utilization will • be promoted by the Cyprus Public Works Department.
- The production of the materials with 3D printing. •









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#### 3. Milestone List

The following chart lists the major milestones for the DEFEAT Project. The chart is comprised only of major project milestones. There may be smaller milestones which are not included on this chart but are taken into account in the project schedule. If there are any scheduling delays which may impact a milestone or delivery date, the project Coordinator must be notified so proactive measures may be taken to mitigate slips in dates. Any approved changes to these milestones or dates will be communicated to the project team by the project Coordinator.

Milestone	Description					
Complete requirements for proper management and dissemination	All requirements for DEFEAT must be determined to all team members					
3D printer, robotic separation system and other equipment procurement	This is a major requirement of DEFEAT					
Design of geopolymeric materials	Design geopolymer form mix design parameters					
Application of 3D printing	Complete installation and use of 3D printer					
Complete DEFEAT testing and validation	All functionality tested and all identified deviations corrected					
Complete invention explore in Media	Discuss DEFEAT in detail worldwide through Media					
Complete transition of DEFEAT to pilot production	Completed software and documentation transitioned to operations group to begin production in a pilot scale					







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### 4. Schedule Baseline and Work Breakdown Structure

The Work Breakdown Structure (WBS) for the DEFEAT project is comprised of 10 distinct work packages which were developed through close collaboration among project team members.

The WBS Dictionary defines all work packages for the DEFEAT Project. These definitions include all tasks, resources and deliverables. Every work package in the WBS will aid in resource planning, task completion and ensuring deliverables meet project requirements.

The DEFEAT project schedule was derived from the WBS, with input from all project team members. The schedule was completed, reviewed and approved by the Project coordinator. The schedule will be monitored with appropriate software by the Project Coordinator. Any proposed changes to the schedule will be submitted to the Project Coordinator. The Project Coordinator and involved team members will determine the impact of the change on the schedule, cost, resources, scope, and risks.

The project schedule baseline and Work Breakdown Structure are provided as per follows:







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WP1. Project Management																																				
WP2. Dissemination Activities																																				
WP3. Construction and Demolition Waste Separation																																				
WP4. Raw Materials Characterization																																				
WP5. Design and Development of the Composite Material																																				
WP6. Material and Properties Engineering																																				
WP7. Production and Pilot Application of the Material																																				
WP8. Technoeconomic Evaluation, LCA Analysis and Business Model																																				
WP9. Activities for the Commercialization of the Material																														Î						
WP10. Development of Guidelines for a Strategic Action Plan for Recycled CDW Reuse																																				
Progress Reports Submitted to RPF												x												x												x









**CESTART** 

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## 4.1 Work Breakdown Structure

PROJECT TITLE	Development of an Innovative Insulation Fire Resistant Façade from the Construction and Demolition Waste	PARTNERS	<ol> <li>Frederick Research Center (FRC)</li> <li>University of Cyprus (UCY)</li> <li>Latomia Pharmakas PLC (PHARMAKAS)</li> <li>S. Netiates &amp; H.Xenis Epixeiriseis Ltd (NETIATIS)</li> <li>RECS Civil Engineers &amp; Partners LLC (RECS)</li> <li>STRATAGEM Energy Ltd (STRATA)</li> <li>Federation of the Building Contractors Associations of Cyprus (OSEOK)</li> <li>Public Works Department (PWD)</li> <li>Ministry of Agriculture, Rural Development and Environment - Department of Environment (DoE)</li> <li>Katholieke Universiteit Leuven (KUL)</li> </ol>
PROJECT COORDINATOR	Dr Nicolaides Demetris	START DATE	1 <sup>st</sup> July, 2020



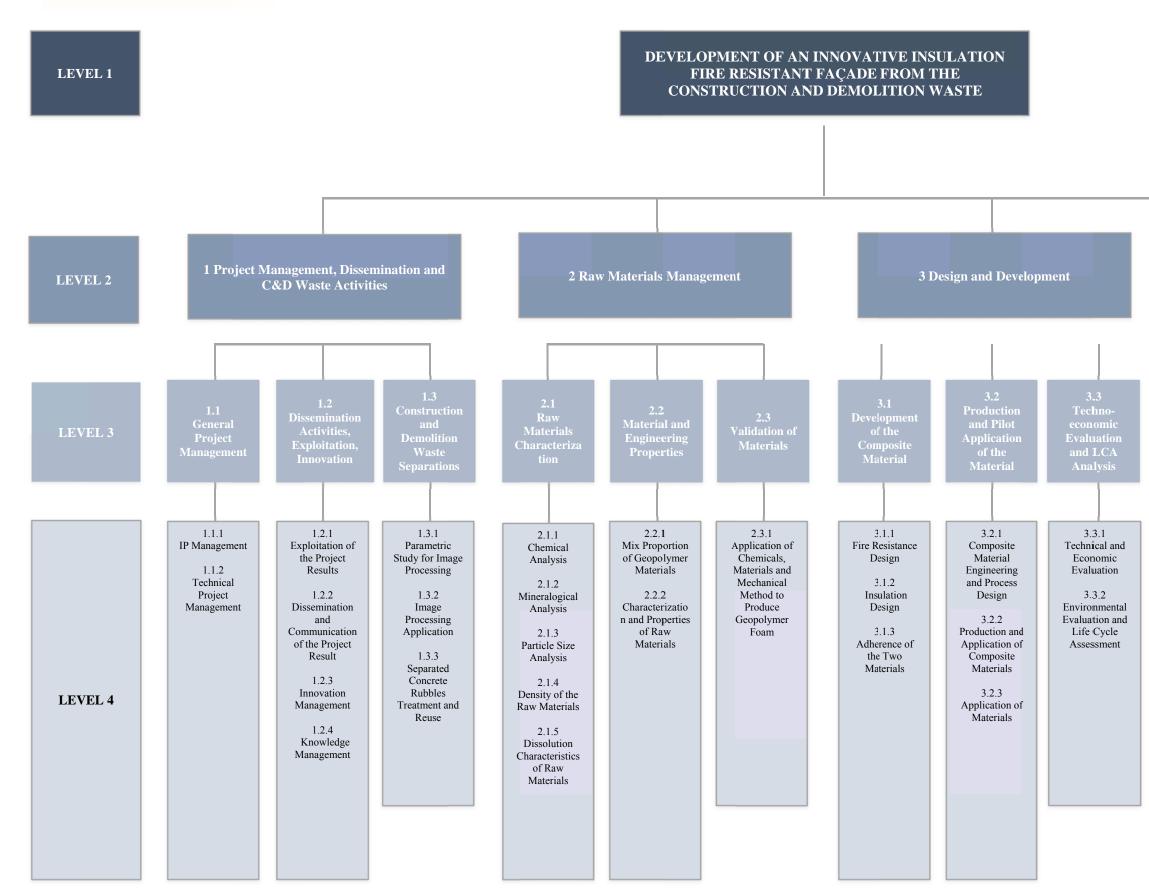


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"Development of an Innovative Insulation Fire Resistant Façade from the Construction and Demolition Waste"

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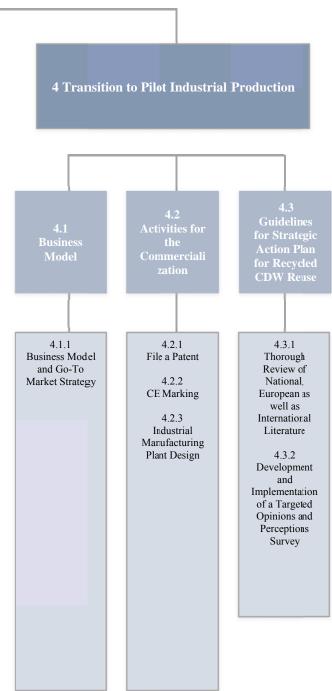












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## 5. Communications Management Plan

This Communications Management Plan sets the communications framework for this project. It will serve as a guide for communications throughout the life of the project and will be updated as communication requirements change. This plan identifies and defines the roles of DEFEAT project team members as they pertain to communications. Also, it encompasses communications matrix which maps the communication requirements of this project, and communication conduct for meetings and other forms of communication. A project team directory is also included to provide contact information for all the members directly engaged in the project.

The Project Coordinator will take the lead role in ensuring effective communications on this project. The communications requirements are documented in the Communications Matrix below. The Communications Matrix will be used as the guide for what information to communicate, who is to do the communicating, when to communicate it, and to whom to communicate.

Communication Type	Description	Frequency	Format	Participants / Distribution	Deliverable	Owner
Weekly Status Report	Summary of project status	Weekly	In Person	Project Team and WP Leaders	Status Report	Project Coordinator
Weekly Project Team Meeting	Meeting to review action register and status	Weekly	In Person	Project Team	Updated Action Register	Project Coordinator
Project Monthly Review (PMR)	Present metrics and status to team	Monthly	In Person	Project Team and WP Leaders	Status and Metric Presentation	Project Coordinator
Project Gate Reviews	Present closeout of project phases	As Needed	In Person	Project Team	Phase Completion Report	Project Coordinator







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Project Coordinator and Managers are:

Name	Title	Email
Dr. Nicolaides Demetris	Project Coordinator	d.nicolaides@frederick.ac.cy
Dr. Konstantinos Sakkas	Technical Manager	dinos@recsengineering.com
Prof. Michael Petrou	Quality Manager	petrou@ucy.ac.cy

## **5.1 Communications Conduct**

Meetings

The Project Coordinator will distribute a meeting agenda at least 15 days prior to any scheduled meeting and all participants are expected to review the agenda prior to the meeting. During all project meetings the timekeeper will ensure that the group adheres to the times stated in the agenda and the recorder will take all notes for distribution to the team upon completion of the meeting. It is imperative that all participants arrive to each meeting should have well-defined objectives in the form of an agenda (utilizing the DEFEAT project dedicated template). The face-to-face meetings should be announced well in advance (it is recommended to announce them minimum 1 month in advance with a view to make possible the necessary arrangements by the Partners). Each meeting shall be recorded by meeting minutes using the DEFEAT project dedicated to the meeting participants within 10 days following the meeting. The minutes shall be revised in accordance with the amendments and comments received. With no further notice the meeting minutes are considered approved 15 days subsequent to the first dissemination.

Some meetings are already planned on a regular basis:

• Steering Committee meetings: at least every 3 months;

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• General Assembly meetings: at least every 12 months;

Additional meetings or teleconferences may be held whenever needed, defined by the Work Packages / tasks / activities.

All email pertaining to the DEFEAT Project should be professional, free of errors, and provide brief communication. Email should be distributed to the correct project participants in accordance with the communication matrix above based on its content. The Project Coordinator should be included on any email pertaining to the DEFEAT Project.

## **5.2 Informal Communications**

While informal communication is a part of every project and is necessary for successful project completion, any issues, concerns, or updates that arise from informal discussion between team members must be communicated to the Project Coordinator so the appropriate action may be taken.

#### **5.3 Communications Management Approach**

The Project Coordinator will take a proactive role in ensuring effective communications on this project. The communications requirements are documented in the Communications Matrix presented in this document. The Communications Matrix will be used as the guide for what information to communicate, who is to do the communicating, when to communicate it and to whom to communicate.

#### **5.4 Communications Management Constraints**

All project communication activities will occur within the project's approved budget, schedule, and resource allocations. The project Coordinator is responsible for ensuring that communication activities are performed by the project team and without external resources which will result in exceeding the authorized budget. Communication activities will occur in accordance with the frequencies detailed in the Communication Matrix in order to ensure the project adheres to schedule constraints. Any deviation of these timelines may result in excessive costs or schedule delays.





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## **5.5 Project Team Directory**

The following table presents contact information for all persons identified in this communications management plan. The email addresses and phone numbers in this table will be used to communicate with these people.

Name	Role	Organization / Department	Email
Dr. Nicolaides Demetris	Project Coordinator	Frederick Research Center	d.nicolaides@frederick.ac.cy
Dr. Konstantinos Sakkas	Technical Manager	RECS Engineering	dinos@recsengineering.com
Dr. Michael Petrou	Quality Manager	University of Cyprus	petrou@ucy.ac.cy
Dr. Sokratis Ioannou	Post-Doc Fellow	University of Cyprus	ioannou.socrates@ucy.ac.cy
Dr. Yiannis Pontikes	Professor	Katholieke University of Leuven	yiannis.pontikes@kuleuven.be
Dr. Pericles Savva	Quality control and research manager	Latomia Pharmakas PLC	psavva@pharmakas.com
Dr. Salmabanu Luhar	Post-Doc Fellow	Frederick Research Center	ersalmabanu.mnit@gmail.com
Dr. Christos Anastasiou	Senior Researcher	Frederick Research Center	c.anastasiou@frederick.ac.cy
Dr. Harris Papadopoulos	Senior Researcher	Frederick Research Center	harris.papadopoulos@gmail.com
Dr. Antonis Michael	Senior Researcher	Frederick Research Center	eng.ma@frederick.ac.cy
Dr. Loucas Papadakis	Senior Researcher	Frederick Research Center	eng.pl@frederick.ac.cy







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Ms. Maria Spanou	PhD Student	Frederick Research Center	mariaspanou7888@gmail.com
Dr. Lubica Kriskova	Senior Researcher	Katholieke University of Leuven	lubica.kriskova@kuleuven.be
Dr. Silviana Onisei	Senior Researcher	Katholieke University of Leuven	Silviana.Onisei@vub.be
Dr. Evgenios Evgeniou	Researcher	DoE	eevgeniou@environment.moa.gov.cy
Mr. Savvinos Lophitis	Researcher	Netiatis	savvinos@lophitis.com
Mr. Costas Papas	Researcher	Netiatis	cpapas@rrccyprus.com
Mr. Antreas Konstantinou	Researcher	Netiatis	akonstantinou@rrccyprus.com
Ms. Natali Glyki	Researcher	Netiatis	administration@rrccyprus.com
Mr. Marios Charalampous	Researcher	RECS Engineering	marios@recsengineering.com
Mr. Marios Valanides	Researcher	RECS Engineering	maria@recsengineering.com
Ms. Anna Iacovou	Researcher	Latomia Pharmakas PLC	AIacovou@pharmakas.com
Ms. Mikaela Georgiou	Researcher	Latomia Pharmakas PLC	mgeorgiou@pharmakas.com
Mr. Thomas Parissis	Researcher	Stratagem	tp@stratagem.com.cy
Ms. Nicole Mavrovounioti	Researcher	Stratagem	nm@stratagem.com.cy
Ms. Stavroula Panagiotidou	Researcher	Stratagem	sp@stratagem.com.cy







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Ms. Georgia Achilleos	Researcher	OSEOK	georgia@oseok.org.cy
Ms. Kyriaki Antoniou	Researcher	OSEOK	kyriaki@oseok.org.cy
Ms. Mary Kotzika	Researcher	OSEOK	mary@oseok.org.cy
Ms. Thekla Kadi	Researcher	PWD	thkadi@pwd.mcw.gov.cy
Ms. Sandy Tsopani	Researcher	PWD	stsopani@pwd.mcw.gov.cy









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## **5.6 Communications Matrix**

The following table identifies the communications requirements for this project.

Communication Type	Objective of Communication	Medium	Frequency	Audience	Owner	Deliverable
Kick-off Meeting	Introduce the project team and the project. Present project objectives and management approach.	• Face to Face and/or Conference Call	Once	• Project Team	Project Coordinator	<ul><li>Agenda</li><li>Meeting Minutes</li></ul>
Steering Committee Meetings	Discuss of project progress with project management authorities.	• Face to Face and/or Conference Call	<ul> <li>Every 6 Months and/or</li> <li>As Needed</li> </ul>	<ul> <li>Steering Committee</li> <li>Invited Team Members</li> </ul>	Project Coordinator	<ul><li>Agenda</li><li>Meeting Minutes</li></ul>
General Assembly Meetings	Review project progress with research team members.	• Face to Face and/or Conference Call	Once a Year	• All Project Team Members	Project Coordinator	<ul><li>Agenda</li><li>Meeting Minutes</li></ul>
Project Team Meetings	Review project progress with research team members.	<ul><li>Face to Face</li><li>Conference Call</li></ul>	Weekly	• Project Team Members	Project Coordinator	• Decisions on actions taken







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Technical Design Meetings	Discuss and develop technical design solutions for the project.	• Face to Face	As Needed	<ul> <li>Project Team Members</li> <li>Lab Technicians</li> </ul>	WP Leader	• Decisions on actions taken
Project Financial Status Meetings	Discuss of project financial status with HO's financial authorities.	<ul><li>Face to Face</li><li>Conference Call</li></ul>	Bimonthly	<ul> <li>Project Managers</li> <li>Financial Manager</li> </ul>	Project Coordinator	<ul><li>Slide updates</li><li>Decisions on actions taken</li></ul>







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#### 6. Cost Management Approach

The Project Coordinator will be responsible for managing and reporting on the project's cost throughout the duration of the project. The Project Coordinator will present and review the project's cost performance during the bimonthly project financial meeting. The Project Coordinator is responsible for accounting for cost deviations and providing solutions for getting the project back on budget. All budget authority and decisions, to include budget changes, reside with the DEFEAT project funding agency, i.e. RIF. An overview of the original project budget is provided below.

Budget €	Cost	Description
Frederick Resear	rch Center – HO	
207.300	Personnel Cost	Participation of 5 Professors and 1 Post-Doc researcher and MSc students for project implementation
35.600	Equipment	Purchase of 3D printer, the accompanying computer and software for printing building materials as well as durability equipment
40.000	Foreign Organization – KU Leuven	Fire resistance design and the geopolymerisation
30.000	External Services	Large scale fire testing of the developed materials
440	External Services	Organization of demo-event and scientific information day
12.000	Travel and Accommodation	Travels to foreign organization for technical meetings and travel cost for participation in conferences
15.000	Consumables	Several consumables for the manufacturing and the validation of the materials after the development
13.000	Specific Cost	Conferences registration fees, Open Access journal fees, etc.







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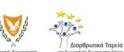


University of Cyprus – PA1			
90.750	Personnel Cost	Participation of PhD Students for the implementation of the project	
3.000	Equipment	Equipment for the materials validation	
10.000	Travel and Accommodation	Travels to foreign organization for technical meetings and travel cost for participation in conferences	
15.000	Consumables	Several consumables for the validation of the materials	
4.000	Specific Cost	Conferences registration fees	
4.000	Specific Cost	Open Access journals fees	

Latomia Pharmakas – PA2			
82.000	Personnel Cost	Participation of a Post-Doc researcher for the implementation of the project as well as persons for the management of the project	
12.000	Equipment	Equipment for the pilot production	
8.000	Consumables	Several consumables for the manufacturing of the materials	
20.000	Specific Cost	CE marking, patent application, etc.	

NETIATIS – PA3			
75.000	Personnel Cost	Participation of a supervisor manager and staff for the CDW separation	
24.000	Equipment	Equipment for the CDW separation	
4.000	Travel and Accommodation	Travel cost for the participation in conferences	
8.000	Consumables	Several consumables for the CDW separation	







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RECS Civil Engineers & Partners - PA4			
90.400	Personnel Cost	Participation of 2 experts for the material design and the LCA conduction and the techno-economic evaluation	
3.000	Travel and Accommodation	Travel cost for participation in conferences and meetings with the foreign organization	
6.000	Consumables	Several consumables for the manufacturing of the materials	
4.000	Specific Cost	Conferences registration fees, etc.	

STRATAGEM Energy – PA5			
61.200	Personnel Cost	Participation of 2 persons to conduct the dissemination plans and support on the LCA	
4.000	Travel and Accommodation	Travel cost for the participation in events to promote DEFEAT results	
2.500	Specific Cost	Conferences registration fees, etc.	
1.000	External Services	Organization of dissemination event	

OSEOK – PA6		
25.650	Personnel Cost	Participation of 2 persons for the project implementation
2.000	External Services	Organization of dissemination event

PWD – PA7		
2.800	Travel and Accommodation	Travel cost for the participation in conferences
3.000	Consumables	Several consumables for the manufacturing of the materials
1.000	Specific Cost	Conferences registration fees, etc.







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DoE – PA8		
4.000	Travel and Accommodation	Travel cost for the participation in conferences
1.000	Specific Cost	Conferences registration fees
4.000	External Services	External services for the implementation of questionnaire survey















## 7. Procurement Management Plan

The Project Coordinator will provide oversight and management for all procurement activities under this project. The Project Coordinator is authorized to approve all procurement actions.

The Project Coordinator will work with the project team to identify all items or services to be procured for the successful completion of the project. The Project Coordinator will then ensure these procurements are reviewed by the purchasing groups team. The purchasing groups team will review the procurement actions, determine whether it is advantageous to make or buy the items or resource required services internally and begin the vendor selection, purchasing and the contracting process.

In the event of necessary procurements, the Project Coordinator will be responsible for management any selected vendor or external resource. The Project Coordinator will also measure performance as it relates to the vendor providing necessary goods and/or services and communicate this to the purchasing and contracts groups.

Also the academic partners should improve their infrastructure with innovative equipment, aiming to introduce into the aspects of the material 3D-printing production. FRC will purchase a 3D printer for printing the developed materials. This printer will be provided by a company with large experience in the manufacturing of 3D printers. In addition, FRC will purchase necessary durability equipment for the implementation of the project, a fact that will considerably improve the research independency and research capabilities of the organization to perform top-notch research.





Page 28 of 54 The Project DEFEAT (INTEGRATED/0918/0052) has been co-funded

by the European Regional Development Fund (ERDF) and the Cyprus Government, through the RESTART 2016-20 framework program of the Cyprus Research & Innovation.Foundation



## 8. Schedule Management Plan

Project schedules for the DEFEAT Project will be created using software starting with the deliverables identified in the project's Work Breakdown Structure (WBS). Activity definition will identify the specific work packages which must be performed to complete each deliverable. Activity sequencing will be used to determine the order of work packages and assign relationships between project activities. Activity duration estimating will be used to calculate the number of work periods required to complete work packages. Resource estimating will be used to assign resources to work packages in order to complete schedule development.

Once a preliminary schedule has been developed, it will be reviewed by the project team and any resources tentatively assigned to project tasks. The project team and resources must agree to the proposed work package assignments, durations, and schedule.

Roles and responsibilities for schedule development are as follows:

The project Coordinator will be responsible for facilitating work package definition, sequencing, and estimating duration and resources with the project team. The project Coordinator will also create the project schedule using software and validate the schedule with the project team.

The project team is responsible for participating in work package definition, sequencing, duration, and resource estimating. The project team will also review and validate the proposed schedule and perform assigned activities once the schedule is approved.







## 9. Quality Management Plan

All members of the DEFEAT project team will play a role in quality management. It is imperative that the team ensures that work is completed at an adequate level of quality from individual work packages to the final project deliverables. The following are the quality roles and responsibilities for the DEFEAT Project:

The Quality Manager is responsible for approving all quality standards for the DEFEAT Project and for quality management throughout the duration of the project. The Quality Manager, in close collaboration with Project Manager, is responsible for implementing the Quality Management Plan and ensuring all tasks, processes and documentation are compliant with the plan. The Project Coordinator will work with the project's Quality Manager to establish acceptable quality standards. The Quality Manager is also responsible for communicating and tracking all quality standards to the project team and stakeholders. Quality Specialists will recommend tools and methodologies for tracking quality and standards to establish acceptable quality levels. The Quality manager will create and maintain Quality Control and Assurance Logs throughout the project.

The remaining member of the project team will be responsible for assisting the Project Coordinator and Quality Manager in the establishment of acceptable quality standards. They will also work to ensure that all quality standards are met and communicate any concerns regarding quality to the Project Coordinator.

Quality control for the DEFEAT Project will utilize tools and methodologies for ensuring that all project deliverables comply with approved quality standards. To meet deliverable requirements and expectations, a formal process in which quality standards are measured and accepted must be implemented. The Project Coordinator will ensure all quality standards and quality control activities are met throughout the project.

Quality assurance for the DEFEAT Project will ensure that all processes used in the completion of the project meet acceptable quality standards. These process standards are in place to maximize project efficiency and minimize waste. For each process used throughout the project,



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the Quality Manager will track and measure quality against the approved standards with the assistance of the Project Coordinator and ensure all quality standards are met.

For each one of the Project Deliverables, a member of the consortium has been assigned as a "Responsible Researcher". "Responsible Researchers" will be in charge of coordinating the group of researchers involved in the particular Deliverable, in order to ensure its implementation on time, within the allocated budget, meeting all the technical requirements. In order to ensure the highest possible quality of all the deliverables of the DEFEAT project, a peer review system will be applied. "Responsible Researchers" will have to submit the completed Deliverables to the corresponding Peer Reviewer(s) before the official Deliverable Completion Time, so to allow sufficient time for the reviewing procedure to be completed by the end of the official deadline.

- In the following Table are summarized the:
  - Project Deliverables
  - Responsible Researchers
  - Peer Reviewers
  - Deliverable Completion Month

A Quality Manager has been assigned during the kick-off meeting of the DEFEAT project.











Deliverable No	Deliverable Name	Relevant WP No	Deliverable Type	Responsible Researcher	Deliverable Completion (Project Month)
D1.1	Consortium Agreement	1	Document	D. Nicolaides	1
D1.2	Project Management Plan	1	Report	D. Nicolaides	2
D1.3	Risk and Mitigation Plan	1	Report	D. Nicolaides	3
D1.4	18 Months Report	1	Report	D. Nicolaides	18
D1.5	Final Report	1	Report	D. Nicolaides	36
D1.6	Minutes of Meetings	1	Document	D. Nicolaides	6/12/18/ 24/36
D2.1	Initial Dissemination Plan (Strategy)	2	Report	T. Parissis	6
D2.2	1 <sup>st</sup> Interim Plan for Use and Dissemination of the Results (PUDR)	2	Report	T. Parissis	18
D2.3	Final Plan for Use and Dissemination of the Results (PUDR)	2	Report	T. Parissis	36
D2.4	Project Website	2	Website	D. Nicolaides	3
D2.5	Data Management Plan	2	Report	T. Parissis	6/36
D2.6	Organization of Scientific Information Day	2	Other	D. Nicolaides	34







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D3.1	Report on the Data Characteristics of each Stream Derived from the CDW	3	Report	H. Papadopoulos	8
D3.2	Report on Applying the Image Processing Technology	3	Document	H. Papadopoulos	26
D3.3	Recycled Concrete Aggregates	3	Materials	P. Savva	20
D3.4	Small Scale Application of Image Processing on CDW Separation	3	Prototype	H. Papadopoulos	23
D3.5	Demonstration Video of the Operation of the Innovative Separation Method	3	Video	H. Papadopoulos	23
D3.6	Two Publications in Open Access Journals	3	Publication	H. Papadopoulos / D. Nicolaides	24/26
D3.7	Two Presentations in Conferences	3	Presentation	H. Papadopoulos / D. Nicolaides	24/26
D3.8	Organization of a Workshop with Local Stakeholders and Contractors	3	Other	T. Parissis	24
D4.1	Full Characterization of the Separated Waste Concrete and Ceramic	4	Other	M. Petrou	7
D4.2	Datasheet of the 2 Waste Streams	4	Document	M. Petrou	8
D5.1	Report on the Fire and Insulation Design	5	Report	K. Sakkas	16









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D5.2	Two Publications in Open Access Journals	5	Publication	K. Sakkas / D. Nicolaides	17/24
D5.3	Material Prototype with Fire and Insulation Properties in Sandwich Type	5	Prototype	K. Sakkas	19
D5.4	Two Presentations in Conferences	5	Presentations	K. Sakkas / D. Nicolaides	18/24
D6.1	Report on the Material Engineering on the Production Method	6	Report	D. Nicolaides / L. Papadakis	22
D6.2	Flowsheet with the Material Production for 3D Printing and Precast	6	Other	D. Nicolaides / L. Papadakis	23
D6.3	Material Datasheet with the most Crucial Properties	6	Other	D. Nicolaides / M. Petrou	25
D6.4	One Publication in Open Access Journal	6	Publication	M. Petrou / D. Nicolaides	25
D6.5	Presentation in Conference	6	Publication	M. Petrou / D. Nicolaides	25
D7.1	Boards Produced in Pilot Scale by Conventional Method	7	Other	P. Savva	24
D7.2	Boards Produced in Pilot Scale by 3D Printing Method	7	Other	L. Papadakis	26









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D7.3	Publication on Material Conference	7	Poster	L. Papadakis / D. Nicolaides	27
D7.4	Publication on Material Journal	7	Publication	L. Papadakis / D. Nicolaides	29
D7.5:	Materials Applied in Operational Environment	7	Other	F. Prokopas / S. Tsopani	31
D7.6	Demonstration Event with the Application of the Materials	7	Other	F. Prokopas	32
D8.1	Feasibility Study	8	Other	M. Petrou	28
D8.2	LCA Report	8	Other	M. Petrou	30
D8.3	DEFEAT Business Plan	8	Other	T. Parissis / P. Savva	34
D9.1	Patent Application	9	Other	T. Parissis / P. Savva	36
D9.2	CE Marking Application	9	Other	T. Parissis / P. Savva	36
D9.3	Report with the Cost & Design of a Large Scale Manufacturing Plant	9	Other	P. Savva	36







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D10.1	Stakeholders' Workshop for Finalization of Questionnaires	10	Other	C. Anastasiou / A. Michael	08
D10.2	Survey Questionnaires	10	Other	C. Anastasiou / A. Michael	14
D10.3	Statistical Analysis of Results and Findings of Questionnaires	10	Report	C. Anastasiou / A. Michael	19
D10.4	Report - Action Plan to CDW Management Governmental Authorities	10	Report	C. Anastasiou / A. Michael	27
D10.5	Executive Report Including the Best Implementation Mechanisms for Successful CDW Reuse Schemes	10	Report	C. Anastasiou / A. Michael	36
D10.6	Publication in Conference	10	Publication	C. Anastasiou / D. Nicolaides	36









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## **10.** Defeat Project Governance Structure

The project is subdivided into ten distinct work packages. WP1 has been assigned to the Project Management; the others are related to the key research areas of the project, i.e., separation of CDW, material characterization, prototype design and process engineering, production and application, exploitation and dissemination of the project outcomes, techno-economic analysis and development of guidelines for a strategic action plan for recycled CDW reuse.

Figure 1 represents the detailed responsibilities and functions of organizational structure of DEFEAT project.

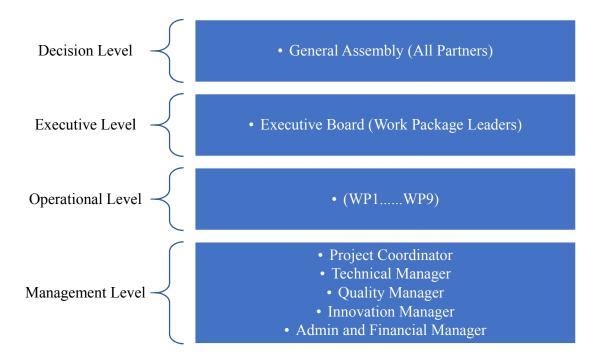


Figure 1: DEFEAT project management structure.

The Project Coordinator is playing a role as the mediator among the Funding Agency (i.e. Research and Innovation Foundation) and the consortium. The Coordinator shall, in addition to its duties as a Party, carry out the tasks allocated to him as portrayed in the EC-GA and the Consortium Agreement;







- The General Assembly (GA) shall be the final administrative body of the Consortium and manage ultimate strategic and technical decision-making together with implementations;
- The Executive Board (EB) is the consortium's executive level. The 10 different WPs of the project, each further detailed into tasks and sub-tasks implemented through a range of partners representing the level of operation of the project;
- The Work Package (WP) Leaders shall be responsible at the Work Package level, not only for coordinating scientifically but also for the communication intra-consortium and management of knowledge.

## **10.1** Composition of the General Assembly (GA):

The project General Assembly (GA), comprises of minimum 1 representative from each consortium partner, including all the WP leaders. GA is defined as the final decision-making body and the consortium conciliation that organizes meeting annually. During the meeting of GA, the milestones, planning, and deliverables are critically reviewed. The decisions on the innovation tasks and research feasibility are taken together with corrective actions and contingency plans if essential. In the GA, each partner gets 1 vote; however, the decisions are preferentially made via a consensus formula. If it is impossible then only a vote is taken in the presence of  $\frac{2}{3}$  majority on the basis of 1 partner, 1 vote prerequisite. The Coordinator shall chair all the General Assembly (GA) meetings. The following decisions shall be made by the GA as per description in the Consortium Agreement:

## Finances, content and intellectual property (IP) rights

- Proposals for modifications to the Consortium Agreement to be approved by all partners.
- Proposals for modifications to Annexes of the Grant Agreement to be approved by the Funding Agency.
- Alterations to the Consortium Plan, including the consortium budget.









## The consortium evolution

- A new Party entry to the consortium and endorsement of the settlement on the accession conditions of such a new Party.
- An approval of the settlement on the conditions of the withdrawal.
- The breach identification by a Party for its obligations under this Consortium Agreement or the Grant Agreement.
- The Party declaration of being a Defaulter Party.
- The remedies to be acted by a Defaulter Party.
- Termination of participation of a Defaulter Party in the consortium and measures concerning thereto.
- The proposal for a change of Coordinator to the Funding Agency.
- The proposal for suspension of a part or whole of the Project to the Funding Authority.
- The proposal for termination of the Project to the Funding Authority and the Consortium Agreement Composition of the Executive Board (EB).

# 10.2 Composition of the Executive Board

The project Executive Board (EB), comprised of the Work Package Leaders (WPL), which is the executive level of the consortium, in charge of putting into practice the project work plan and the GA decisions.

What's more, the EB proposes the fitting actions to the GA and evaluates the project progress. The Executive Board shall consist of the Coordinator, the Work Package Leaders and representatives of other partners of the consortium. The GA can appoint additional Parties as Members of the EB. The Coordinator shall chair every EB meetings, if not decided otherwise by  $\frac{2}{3}$  majority. The Executive Board (EB) shall:

- propose decisions, organize the meetings, and get ready the agenda of the GA,
- search for a consensus amongst the Parties,
- be answerable for the correct execution and implementation of the decisions of the GA,

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- monitor the effectual and well-organized implementation of the Project,
- data collection for minimum every 6 months on the Project progress and examine that information to assess the compliance of the Project with the Consortium Plan and, if required, propose changes in the Consortium Plan to the GA and the findings of this process shall be communicated to the GA in writing.
- support the Coordinator in organising and getting ready for meetings with the Funding Agency and in preparing associated information and deliverables,
- make ready the content and plan the timing for press releases and collaborative publications by the Consortium or as proposed by the Funding Agency in context of the practices of the Grant Agreement,
- advise the GA on ways to reorganize tasks and budgets of the Parties concerned in the case of abolished tasks owing to a decision of the GA. Such rearrangement shall take into consideration the legitimate commitments taken before the decisions, which cannot be cancelled.

The EB-member shall meet at least every 3 months. Any member should attend or represented at any meeting. The Coordinator shall chair all meetings of the EB, if not decided otherwise by the EB. The meetings shall be organized with minimum 14 days before written notice. Any Member may add an item to the original agenda by written notification to all of the other Members not later than 2 calendar days previous to the meeting. The minutes of EB meetings, shall be sent by the Coordinator to the GA-Members for information on acceptance.

## **10.3** Composition of the Work Package (WP) Teams:

A Work Package (WP) Team shall consist of 1 representative of each Party with a task within the respective Work Package (WP). A Work Package Leader (WPL) shall chair every meetings of a Work Package Team. The minutes of Work Package Teams meetings, once accepted, shall be sent by the WPL to the EB Members and the Coordinator for information. Each Work Package Team shall handle the respective Work Package (WP), particularly, in context of the on time delivery of outcomes and reports. Also, it implies formulating and putting into practice the Page 40 of 54









plan for the activities within the Work Package (WP). The different Work Packages of the DEFEAT project are demonstrated in Figure 2.

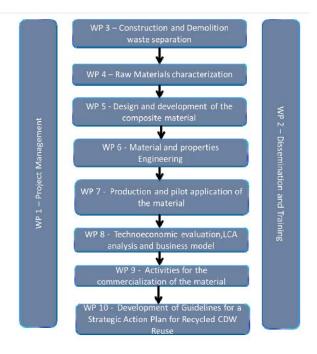


Figure 2: DEFEAT project Work Packages.











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## Table 2: Work Packages and Task Leaders

WP No.	WP Title	WP Leader	Task	Task Leader
1	Project Management	D. Nicolaides	1.1 General Project Management	D. Nicolaides
			<b>1.2</b> IP Management	S. Luhar
			1.3 Technical Project Management	K. Sakkas
2	Dissemination Activities, Exploitation & Innovation Management	T. Parissis	<b>2.1</b> Exploitation of the Project Results	T. Parissis
			<b>2.2</b> Dissemination and Communication of the Project Results	T. Parissis
			2.3 Innovation Management	T. Parissis
			2.4 Knowledge Management	T. Parissis
3	Construction and Demolition Waste Separation	H. Papadopoulos	<b>3.1</b> Definition of Crucial Parameters for the Image Processing	H. Papadopoulos
			3.2 Image Processing Application	H. Papadopoulos
			3.3 Separated Concrete Rubbles Treatment and Reuse	P. Savva
4	Raw Materials Characterization	M. Petrou	4.1 Chemical Analysis	UCY Post-Doc
			<b>4.2</b> Mineralogical Analysis	
			<b>4.3</b> Particle Size Analysis	
			<b>4.4</b> Density of the Raw Materials	
			4.5 Dissolution Tests	
5	Design and Development of the Composite Material	K. Sakkas	5.1 Fire Resistance Design	K. Sakkas
			5.2 Insulation Design	K. Sakkas
			5.3 Adherence of the Two Materials	A. Michael
6	Material and Properties Engineering	K. Sakkas	6.1 Design of Properties of the Geopolymeric Materials	S. Luhar / L. Papadakis
			6.2 Characterization and Properties Measurement	S. Luhar / UCY Post-Doc / PhD









7	Production and Pilot Application of the Material	P. Savva	7.1 Composite Material Engineering and Process Design	P. Savva
			<b>7.2</b> Production and Application of Composite Materials	P. Savva / L. Papadakis
			<b>7.3</b> Application of the Materials	F. Prokopas / S. Tsopani
8	Technoeconomic Evaluation, LCA Analysis and Business Model	P. Savva	8.1 Technical and Economic Evaluation	UCY Post-Doc / Support by Stratagem
			8.2 Environmental Evaluation and Life Cycle Assessment	UCY Post-Doc / Support by Stratagem
			<b>8.3</b> Business Model and Go – To Market Strategy	T. Parissis / P. Savva
9	Activities for the Commercialization of the Material	P. Savva	9.1 Patenting	P. Savva / T. Parissis
			9.2 CE Marking	P. Savva / T. Parissis
			9.3 Design of the Industrial Manufacturing Plant	T. Parissis / P. Savva
10	Development of Guidelines for a Strategic Action Plan for Recycled CDW Reuse	C. Anastasiou	<b>10.1</b> A thorough review of the National, the European and the International Literature	A. Michael
			<b>10.2</b> Development and Implementation of a Targeted Opinions and Perceptions Survey	C. Anastasiou







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The diverse Work Packages are led by the WPLs - answerable for making sure the good-quality coordination and communication of all technical activities taken by the participants of these Work Packages in context with the Executive Board directions.

## 10.4 Composition of the Management Support Team

The Management Support Team (MST) shall be appointed by the Coordinator and shall help out and assist with the work of the EB and the Coordinator for implementation of the decisions of the GA and the of daily Project management.

The following roles are predicted for the Management support team (MST):

- Project Manager (PM)
- Technical Manager (TM)
- Quality Manager (QM)
- Innovation Manager (IM)
- Administrative and Financial Manager (AFM)

Technical Manager (TM): The TM is responsible for the tuneful coordination/ synchronization and evaluation of the research endeavor among diverse groups.

Quality Manager (QM): The QM is responsible for ensuring that the outcomes of the project meet the expectations and standards set by the DEFEAT project. Specially, QM will focus on monitoring the demonstration activities across a variety of pilot plants in DEFEAT project during their set up and operations.

Administrative and Financial Manager (AFM): MP supports the PM at the micro-management level. MP generates and offers tools, templates and guidelines to every single partner with a view to make easy the effectual communication, monitoring the progress and reporting of the outcomes. MP assists the PM in maintaining records and meetings organization at all project levels.









Innovation Manager (IM): The IM is responsible for the foreground protection activities of DEFEAT project management and for the generation/ collection of material to be communicated outside the consortium as well. Also, the responsibility of regular innovation meetings to drive the course of innovation for assurance to attain the objectives of the DEFEAT project goes with TM.













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# **11. Deliverables**

Several deliverables per WP are scheduled and expressed in the Description of Work Packages (Annex to the Grant Agreement), which will be produced all through the project life period. For each deliverable, there are:

The lead beneficiary, in charge of:

- Coordinating the entire and proper realisation of the deliverable,
- Defining the content and controlling the uniformity of the content in accordance with the initial purpose of the deliverable;
- The author, in charge required data collection from involved Partners and producing the deliverable;
- The WPL, the Coordinator, at least 2 peer reviewers, in charge of:
  - Making certain the scientific and technical sufficiency of the content of deliverable to the objectives of the project and the contribution of the deliverable to the realisation of these goals,
  - Ensuring that the deliverable is in harmony with the state-of-the-art,
  - Making sure the deliverable meets the quality prerequisites for the dissemination,
  - To make sure the deliverable is completed in stipulated time.

In the interest to assure for homogeneity, every deliverable produced must be on the basis of DEFEAT project deliverable template. The deliverables shall not be the compilation of uncorrelated contributions and must form a consistent whole. Deliverables must present project findings synthetically and cannot be a publications collection. Publications list, all references, relevant work and technical details should be included at the end of the deliverable in an Annex section.

## Deliverables Revision:

The revisions crop up while updating a document part previously distributed. If revisions are made, alterations must be made by utilization of a different colour (or using the amendment









mode - i.e. track modifications). A revision methodically implies modify of the version, written up on the cover page.

#### Deliverables Evaluation Process:

With a view to make certain a time bound production of the contractual documents; an evaluation process is put in place, specifying the planning and actions to be followed.

The deliverables must be provided to the Cyprus Research and Innovation Foundation (RIF) on the delivery date stated in the Grant Agreement. In interest to enable the deliverable evaluation course and meet the delivery date, each deliverable shall be ready for evaluation preferably 1 month earlier than the due delivery date.

- 1 month before the official deliverable due date, the Administrative Manager offers to author and lead beneficiary the template for the deliverable and reminds the instructions.
- 3 weeks before the deliverable due date, the author and the lead beneficiary shall send the deliverable to the reviewers.
- The reviewers must evaluate the deliverable and communicate their comments to the editor within 7 calendar day.
- If the reviewers request minor improvements or changes to the deliverable, the deliverable can proceed to the validation phase.
- The author shall update the deliverable according to the recommendations of reviewers. The updated version is then communicated to the Coordinator for validation.
- The Coordinator will take care to confirm that the comments of the reviewers have been addressed in an acceptable approach.
- The Administrative Manager will treat the deliverable as final and store the file on the DEFEAT project local directory with a particular label upon reception of the validation by the Coordinator. When public (PU), the deliverable is also posted on the DEFEAT project website. The Administrative Manager will also notify the Partners of the publication for the new deliverable.









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• The Coordinator will transmit the deliverable to the Funding Agency before the completion of the particular reporting period.

These last steps shall be completed within 7 calendar days.

- If the reviewers request major alterations or improvements to the deliverable, the deliverable cannot proceed directly to the validation phase.
- The deliverable shall be re-worked by the author (and the contributing Partners) to address the recommendations of the reviewers.
- The author has to improve the deliverable and send back the updated deliverable to the reviewers and copy to the Coordinator within 7 calendar days.

The process is then resumed at the document ready for review step (Figure 3).



Figure 3: The Deliverable Evaluation Process.



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# **12.** Management Reports

WP leaders will be responsible to give details of the progress of the WP or task in conformity with objectives of DEFEAT project at least every 6-months period and to estimate the next 6 months. For that reason, a 12-months overview should always be obtainable.

## Periodic Reporting:

The First Periodic Report will be submitted at 18 months of the project respectively while the Second Periodic Report together with the final report will be submitted at month 36 month to the Funding Agency. The Periodic Report consists of a report of the work carried out per WP and the justifications about the main cost items per Partner, along with an analysis at project level. It is a valuable tool to maintain track of project expenditures and to identify and foresee mitigation plan in case of major deviations. This report has the following structure/guidelines provided by the Funding Agency:

- General Project Information;
- Description of the work carried out by all beneficiaries during this reporting period
- Explanation of the work carried out per Work Package;
- WPs contract and actual implementation timeframe;
- Any additional information deemed necessary;
- Financial statements and Summary financial report.

The timeline for the production of the Periodic Report is set as follows:

- Each and every one of Partners and WPL will be reminded to contribute for the Periodic Report 6 weeks before the end of the reporting period, and will receive template and guidelines too.
- Both Partners and WPL will have 4 weeks to complete their contribution into the Periodic Report.
- Consolidation of the contributions obtained will be made within 15 days by the Administrative Manager. Partners and WPL will be contacted if discrepancies occur.

Ευρωπαϊκή Ένωση Ευρωπαϊκό Ταμίο Περιφεριασής Ανάπτυξης





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- The Coordinator will review the Periodic Report, ask for its validation or improvements.
- The Periodic Report will be provided to the Funding Agency and will be saved in the DEFEAT project directory upon validation by the Coordinator. The Administrative Manager will also notify the Partners for the finalisation of the Periodic Reports.

Periodic reports will be due to the Research and Innovation Foundation (RIF) at:

- Periodic Report 1: Month 18;
- Periodic Report 2 Final report: Month 36.











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#### 13. **Contract Amendments**

Any changes concerning the project work plan, or in the Partners' budget, or with respect to the representatives authorized to sign contractual documents shall be communicated to the Coordinator and to the Administrative Manager. These alterations shall be validated by the General Assembly whenever essential, and the contract amendment will be requested by the Coordinator to the Project Officer of the Funding Agency.











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# 14. **Publications**

All deliverables, scientific papers and articles to be published, in regards to DEFEAT project activities of exploitation and dissemination of the project results, must make provision for recognition of the ERDF financial support, in accordance with the "Handbook for the Conduct of Actions of Information and Communication for projects co-funded by the Programme Period 2014-2020 European Structural and Investment Funds (ESIF). All the relevant documents and activities shall include in acknowledgement the following text:

#### For publications:

- (i) In Greeks / Ελληνικά: «Η ερευνητική εργασία (Έργο: DEFEAT/ INTEGRATED/0918/0052) έχει συγχρηματοδοτηθεί από το Ευρωπαϊκό Ταμείο Περιφερειακής Ανάπτυξης (ΕΤΠΑ) και από την Κυπριακή Κυβέρνηση, μέσω του Προγράμματος Πλαισίου RESTART 2016-2020 του Κυπριακού Ιδρύματος Έρευνας και Καινοτομίας.»
- (ii) In English / Αγγλικά: "The research work (Project: DEFEAT / INTEGRATED/0918/0052) has been co-funded by the European Regional Development Fund (ERDF) and the Cyprus Government, through the RESTART 2016-2020 framework program of the Cyprus Research & Innovation Foundation"

#### For other visual references:

- (i) In Greeks / Ελληνικά: Το Έργο DEFEAT (INTEGRATED/0918/0052) έχει συγχρηματοδοτηθεί από το Ευρωπαϊκό Ταμείο Περιφερειακής Ανάπτυξης (ΕΤΠΑ) και από την Κυπριακή Κυβέρνηση, μέσω του Προγράμματος Πλαισίου RESTART 2016-2020 του Κυπριακού Ιδρύματος Έρευνας και Καινοτομίας.
- (ii) In English / Αγγλικά: "The Project DEFEAT (INTEGRATED/0918/0052) has been co-funded by the European Regional Development Fund (ERDF) and the Cyprus Government, through the RESTART 2016-20 framework program of the Cyprus Research & Innovation Foundation"









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Except for the above mentioned text of Acknowledgement, all the visual references and all the DEFEAT Project that are related to exploitation and dissemination activities of the project results, as well as all the Consortium communication activities, must include the logos of the Cyprus Research and Innovation Foundation (RIF), the EU and the Republic of Cyprus, along with the logo of DEFEAT project (Figure 4 below as examples):



Figure 4. Illustration of logos that must be included in all visual references of DEFEAT

Process for validation of publications:

The below mentioned process shall apply when communications associated with DEFEAT project are planned. The objective of this procedure is to make sure that the publication is within the project scope/activities, to maintain the track of the work disseminated, and to guarantee that Intellectual Property (IP) rules defined in the Project Agreement are followed strictly. The project in-house procedure to be followed with a view to submit the papers supported by and acknowledging with the DEFEAT project is as follows:

Prior to publication:

- The prior notice of any planned publication shall be presented to all the Partners in due time, as described in Article 8 of the Consortium Agreement.
- Any objection to the planned publication shall be made to the Coordinator and to any Partners concerned in due time, described in Article 8 of the Consortium Agreement.
- Any written form of agreement including emails will be considered, and the concerned Partner will have to be capable to make available it if essential.
- If no objection is made the publication will be allowed.









• If an objection has been raised the involved Partners shall discuss how to address the justified grounds for the objection, for example, by amendment to the planned publication and/or by protecting data previous to publication.

After acceptance:

- The author(s) sends the final version to the Coordinator and the Administrative Manager.
- The Administrative Manager posts the communication on the DEFEAT project directory.

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