

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

DEFEAT

INTEGRATED/0918/0052

DELIVERABLE D2.1

INITIAL DISSEMINATION PLAN (STRATEGY)

DELIVERABLE INFORMATION

Deliverable No	D2.1	
Deliverable Title	Initial Dissemination Plan (Strategy)	
Work Package and Task Number	<i>Work Package 2</i>	<i>Task 2.2</i>
Participants:	<input checked="" type="checkbox"/> PA5 - STRATA <input checked="" type="checkbox"/> HO – FRC <input checked="" type="checkbox"/> PA1- UCY <input checked="" type="checkbox"/> PA2 – PLC <input checked="" type="checkbox"/> PA3 - NETIATIS <input checked="" type="checkbox"/> PA4- RECS <input checked="" type="checkbox"/> PA6 – OSEOK <input checked="" type="checkbox"/> PA7 - PWD <input checked="" type="checkbox"/> PA8 - DoE <input checked="" type="checkbox"/> FO1 - KUL	

Sign off	Name	Date Approved
Originator	STRATAGEM ENERGY Ltd	
Work Package leader	STRATAGEM ENERGY Ltd	
Technical Manager	RECS - Dr Konstantinos Sakkas	
Coordinator	FRC - Dr Nicolaides Demetris	

Dissemination Level ¹		
PU	<i>Public</i>	X
CO	<i>Confidential, only for members of the consortium (including the Commission Services)</i>	

¹ Enter a cross (X) in the appropriate cell.

DISCLAIMER

This document contains the description of the DEFEAT project findings, work and products. Certain parts of it might be under partner Intellectual Property Right (IPR) rules. Therefore, prior to using its content please contact the consortium coordinator for approval. E-mail: d.nicolaides@frederick.ac.cy

Should you feel that this document harms in any way the IPR held by you as a person or as a representative of an entity, please do notify us immediately.

The authors of this document have taken all available measures in order for its content to be accurate, consistent and lawful. However, neither the project consortium as a whole nor the individual partners that implicitly or explicitly participated in the creation and publication of this document hold any sort of responsibility that might occur as a result of using its content.

This document has been produced with the assistance of the Republic of Cyprus, the Cyprus Research & Innovation Foundation (RIF) and the European Regional Development Fund. The content of this document is the sole responsibility of the DEFEAT consortium and can in no way be taken to reflect the views of the European Union.

List of Contents

1. Project Summary	6
2. Glossary of Terms	8
2.1 Definitions	8
2.2 Additional Definitions	8
3. Description of Work	9
3.1 Purpose of the Dissemination Plan	9
3.2 Target Audience	10
4. Dissemination Plan	10
4.1 Planned use of the project results	11
4.2 Development of the Dissemination Material and Tools	11
4.3 Usage of Dissemination channels	13
4.4 Progress Monitoring	14
4.5 Dissemination Plan During and After the Project Lifetime	15
4.6 Dissemination activities during the first 6Ms of the project	18
4.6.1 DEFEAT website & social media platforms	18
4.6.2 DEFEAT leaflet	20
4.6.3 DEFEAT newsletter	22
4.6.4 DEFEAT video	23
4.6.5 Participation at events and publications	24
4.6.6 Internal Dissemination Activities	32
5. Conclusions	33
6. Acknowledgements	34
7. Appendix	35

List of Tables

Table 1. DEFEAT Communication Strategy Monitoring	14
Table 2. An indicative list with events that partners will examine participation.	16
Table 3. Communication and Dissemination Activities took place the first 6 Months of the Project.	25

List of Figures

Figure 1. Header of DEFEAT website	18
Figure 2. Footer of DEFEAT's website Homepage	19
Figure 3. Project leaflet - cover pages	21
Figure 4 Project Leaflet - inside pages	21
Figure 5. First page of the Newsletter #1	23
Figure 6. Screenshots from DEFEAT dissemination video	24
Figure 7. DEFEAT virtual Kick off Meeting	32

1. Project Summary

The management of Construction and Demolition Waste (CDW) in Cyprus faces several challenges and appears to be underperforming, as well as there is a lack of recycling technologies to be applied in this type of waste in order to increase the salvage value of the building. In addition, over the last decade, the construction activities in Europe were accelerated as well as the rehabilitation activities for energy saving, as a general need to facilitate the accommodation. Even though the construction works are ongoing, only in the recent years the safety of such infrastructures has gained increasing attention, particularly the issue of fire. Towards this end, the scope of the DEFEAT project is the innovative separation and transformation of CDW into an innovative insulation fire resistant facade.

The DEFEAT project will develop in pilot scale and through detailed experimental study, an innovative separation method of CDW, as well as a composite material generated also from the CDW, which will gain low thermal conductivity, satisfactory mechanical properties and at the same time will be fire resistant. Initially, a novel method will be utilized for the optimization of the separation of the CDW in order to receive “Clean” materials after the CDW collection. On this purpose the technology of image processing will be applied to optimize the separation process. As a result, both recycled concrete aggregates and also the raw material that will be used for the development of the insulation and fire resistant composite for building applications, will be obtained. For the latter, the technology of geopolymerisation will be applied. The optimization of the material density will be achieved by chemical and mechanical methods while the production will be held by a conventional method and 3D-printing. In addition, the final products will be evaluated in terms of thermal, mechanical, fire resistance properties, as well as financial cost, to allow for their full market potential and uptake within 3 years after the end of the project. At the end of the project, an attempt will be carried out in order to establish a framework for utilizing CDW as a raw material in the building industry.

The social, economic, environmental, and scientific impacts of the project and the whole consortium of DEFEAT are summarized below:

Social impacts

- Utilization of waste and return to the production cycle as a high value-added material in the context of the circular economy.
- Developing products that have an impact on the building sector and benefits most of society.
- Decrease of a waste with a simultaneous positive impact on the environmental footprint created by the deposition so far.

Economic impacts

- Stimulate the economy by introducing new materials in the building material sector that increase competition and lead to lower prices.
- Developing innovative materials by leveraging a number of companies wishing to mass-produce and sell them, creating growth conditions for the economy.
- Creating Net Added Value by investing and launching a high value-added product line and creation of a suitable environment for the further development of innovative building materials (geopolymers) by companies in Cyprus.

Environmental impacts

- Low energy consumption for the development of geopolymers, since the curing temperature is ambient.
- Low energy consumption for the waste separation.
- Reduced CO₂ emissions compared to the cement and concrete industry.
- The utilization of a waste for the production of an innovative product and the elimination of the relevant environmental impacts is related with the environmental and societal progress in Europe.

Scientific impacts

- Developing of know-how and transferring it to the industrial level in the recovery of construction waste materials, through the production of recycled aggregates and the development of a composite thermal and fire insulation material, as well as on the waste separation.
- Training of scientists and staff in an interdisciplinary environment related to materials engineering.

2. Glossary of Terms

Acronym	Meaning
CDW	Construction and Demolition Waste
EC	European Commission
EU	European Union
HO	Host Organization

2.1 Definitions

Words beginning with a capital letter shall have the meaning defined either herein or in the Rules or in the Grant Agreement related to the Project.

2.2 Additional Definitions

- **Project** refers to the DEFEAT project funded from the Cyprus Research & Innovation Foundation (Programmes for Research, Technological Development and Innovation – RESTART 2016 – 2020).

3. Description of Work

3.1 Purpose of the Dissemination Plan

The purpose of this Dissemination Plan is to identify, organize and promote the dissemination channels and activities to be undertaken within the DEFEAT project, in order to ensure the promotion of the project and multiply its impacts. Moreover, this document summarizes the planning of the activities relevant to dissemination of the project's results, vision and ideas for the entire lifetime of the project, from M1 to M36.

This document aims to present the project's progress on the planning of dissemination activities and the conduction of specific market penetration strategies for the results of the project. In order to accelerate the implementation of the research findings, the DEFEAT partners intend to maximise the dissemination of results and to express them in terms that are readily understandable to stakeholders at public authorities, industry and suppliers. Dissemination tools that will be adopted for the promotion of the project results include the functionalization of the project website and specific newsletters via this website. Moreover, the consortium will participate in relevant European and international scientific conferences, exhibitions, workshops, technical and industrial fairs and other events, in order to disseminate and communicate the DEFEAT project results. Scientific and technical publications on relevant journals (open access academic and industrial community), conference proceedings (academic and industrial community), technical magazines (entrepreneurs, researchers, wide public) will be also used for the communication of the project results. In addition, project material like leaflets, brochures, etc., general audience articles (technical magazines, etc.), press conferences and releases will be implemented within the framework of the DEFEAT dissemination activities.

The dissemination activities in the DEFEAT project will try to raise awareness in order to maximise its impact and encourage acceptance of its results by the targeted stakeholders. This plan is intended to ensure that the dissemination activities within DEFEAT project are closely oriented to the current and future market opportunities and to prepare the target audience including potential users, researches and strategic partners for the adoption of DEFEAT results and products.

*The dissemination strategy will be continuously adjusted to follow the European Union rules for the COVID-19 pandemic. All the planned activities will take place either physically or virtually depending on the virus spread.

3.2 Target Audience

DEFEAT's consortium partners are going to establish contact with a range of stakeholders in order to engage them at an initial project stage and ensure a closely aligned technical development. The most relevant communities have been identified and the dissemination strategy has been designed to evolve during the duration of the project aiming to reach:

- Policy Makers, Industries and SMEs
- Potential End-Users, Inventors and Consultation Groups
- Sectoral Working Groups and Associations
- Academics
- Wider Public
- The European Commission

4. Dissemination Plan

Dissemination and communication activities in the DEFEAT project will focus on innovative and engaging ways to share results mainly in Cyprus and also across Europe. Dissemination activities are planned in a way to facilitate the realization of the project and maximize its impact. Additionally, it prepares the ground for effective commercial exploitation of the DEFEAT products and technology. They will be based on scientific dissemination tools and communication measures, in order to reach the largest possible audience.

The dissemination activities include:

- Participation in the most important National, European and international scientific conferences relevant or dedicated to waste management, waste processing, construction materials, construction sector, environmental management and related research activities and applications.
- Awareness Programmes including the publication of project results on the websites and social media.
- Publication of project results in scientific and technical papers, journals, technical magazines and National and International conferences, exhibitions and workshops.

4.1 Planned use of the project results

The project results have been and will be presented at conferences and published in scientific journals. The partner organizations participating in the project have been and will continue to disseminate the results within their business units and transfer the knowledge and experiences gained. All the members of the consortium will continue to disseminate the results of the project to the broader audience and publish them in technical and commercial magazines related to prefabricated buildings & constructions, building & construction materials, CDW recycling, waste management, environmental management and related research activities and applications.

Focusing initially at the European market and especially the Cypriot market, the exploitation of the DEFEAT results and products will start by contacting customers at the prefabricated buildings & constructions sector along with the building & construction materials sector. Furthermore, additional markets will be investigated (i.e. broader construction sector, CDW recycling, waste management, environmental management, etc.). Then the novel technology will be disseminated throughout the rest of the world, partners will be sourced, and new distribution agents will be required to retail the technologies in secondary markets.

4.2 Development of the Dissemination Material and Tools

Dissemination tools and activities are designed to reach the various target groups in an effective and at the same time efficient way. The dissemination activities foreseen during the duration of the DEFEAT project and after it are briefly described below:

- **Project website:** A project website where the project is presented to the general public has been launched. The website is in English where the most up-to-date details about project activity through a news feed, event calendar and publications list are provided. The website is included in the Host's Organization (HO) website.
- **Project social media platforms:** The use of social media for the DEFEAT project contributes to establish and maintain public engagement with the project. Facebook, Twitter and LinkedIn have been developed to approach a broader audience, to open/join discussions on advance in geopolymerisation technology, etc., and further promoting the results of the project. The social media accounts are available for access through the project's website and vice versa.

- **Project video:** A project video has already been developed by the consortium, to be disseminated to a broader audience and features on the project's Website, Social Media and YouTube channel. A Demonstration video of the operation of the innovative separation method will be developed and released on May of 2022 by the Frederick Research Center.
- **Project Leaflet:** A leaflet providing basic information about the project main goals, the technical approach, the expected achievements and a list of project participants and its consortium has been developed. This serves as the project's "business card" and is distributed, by the project beneficiaries, as widely as possible in any appropriate occasion. The leaflet is available on the public website.
- **Project Logo:** A project logo has been developed to address the perspective and the main goal of the project. The major focus is to provide a solid and coherent visual identity, to those who can contribute to evaluation and further exploitation of the DEFEAT project outcomes.
- **Project Newsletters:** There will be a regular e-newsletter to raise awareness of the DEFEAT project and communicate its outcomes and learnings. The newsletter is in English and it will be sent to identified stakeholders and interested people subscribing to it through the project website and members/representatives of the media. All newsletters will be available in the DEFEAT website.
- **Press Releases:** Press releases have already been used and will continue to be used to inform on the project's public activities, deliverables, milestones and achieved results to get the attention at European, national, regional and local level. Press releases are going to be written in English and Greek and distributed to recipients, such as international interest groups, European Union officials and other interested public.
- **Scientific and Technical Publications:** Throughout the project lifetime, scientific and technical publications on relevant journals (academic and industrial community), conference proceedings (academic and industrial community), technical magazines (entrepreneurs, researchers, wide public), will be used for the communication of the project results. At several occasions representatives of the Consortium and the Project Coordinator in particular, assist and assure presentations to promote and explain the aims of the project and if available

publish the public results at these occasions. The published materials will be available on the project's website.

- **Non-Scientific Articles:** Other publications of non-scientific nature including general public oriented printed or online texts are foreseen through the project lifetime.
- **Participation at Scientific Conferences and Workshops:** High-profile academic conferences and workshops organized by European, national and international organizations will be targeted. These conferences and workshops involve and/or represent waste management research communities, where the project and its outcomes will be presented, its activities will be promoted, as well as interaction and exchange of information will be made between interested groups and scientific community.
- **Participation in Exhibitions, Technical and Industrial Fairs:** Exhibitions and fairs provide a great opportunity to demonstrate the DEFEAT project's results and potential to interested parties, end-users and a wider audience for practical experience.
- **Organization of a Scientific Information Day:** This event will take place on M34 and will target to industry's staff, students, researchers, public authorities' staff in order to promote the innovations (image processing and geopolymerisation) involved in the DEFEAT project.
- **Organization of a Demo-Event:** An event will be organized by the host organization for demonstration of the separation technology and pilot application of the composite material. The event will target to local stakeholders, industries, construction companies, SMEs.

4.3 Usage of Dissemination channels

The Consortium's activities can be lined up along the following dissemination channels:

- Conventional and electronic publications.
- Participation and/or Organization of Events: Active participation (e.g. presentations) at international conferences, workshops, seminars and working groups meetings are encouraged.
- Press conferences and press releases.
- Knowledge transfer to other projects and networks.

- The World Wide Web: documentation will be circulated through the internet via the project website, news and e-mail to potential future users, without disclosure of classified information.

4.4 Progress Monitoring

The reach and impact of DEFEAT communication and dissemination activities will be assessed and closely monitored using participants statistics, search metrics and other established indicators of media use.

The table below indicates the measures that will be used to evaluate the output of the dissemination activities:

Table 1. DEFEAT Communication Strategy Monitoring

Communication Tool	Quantification	Proof of Communication
Project Website (page)	No. of visitors (hits) and downloads on the project website/page	Search Metrics
Scientific Newsletters	No. of issues	Copies of Newsletters
Social Media Actions	Facebook: No. of posts per year	Search Metrics
	LinkedIn: No. of posts per year	Search Metrics
	Tweets: No. of posts per year	Search Metrics
Press Release	No. of Press Releases	Copies of Press Releases
Scientific Articles and Technical Magazines	No. of Publications	Records of Publications
Non-Scientific Articles	No. of Publications	Records of Publications
Conferences and Workshops	No. of Conferences	Report of Conferences, registration list and photos
	No. of Workshops	Report of Workshops, registration list and photos
Exhibitions, Technical and Industrial Fairs	No. of Exhibitions	Report of Exhibitions, registration list and photos
	No. of Technical and Industrial Fairs	Report of Technical and Industrial Fairs, registration

		list and photos
--	--	-----------------

4.5 Dissemination Plan During and After the Project Lifetime

The project's results and progress will be disseminated to specific groups in Cyprus and Europe, such as prefabricated buildings & construction companies, building & construction materials companies, CDW recycling companies, waste management companies, environmental management companies and companies in the wider construction sector.

All information (i.e. submitted deliverables to EU) are distributed among the partners and are available via the dedicated private website section and the repository that has been created for the purposes of the project. Regular meetings, teleconferences and general project meetings with all the partners are held on a regular basis and whenever necessary since the beginning of the project.

The external dissemination of the project takes and will continue to take place via:

- The public part of the website.
- Project presentation at national and international meetings.
- In-person meetings (virtually and physically) of people from the consortium with various interested stakeholders.
- Scientific and general awareness publications in journals.
- The project leaflet which partners from the whole consortium use.
- Social media channels such as Facebook and LinkedIn, also available for access from the project's website.

During the project, the consortium members will participate in several events, disseminating the project, its scope, its forthcoming results and its vision. These events range from conferences with European and international attendees from joining industry, to events with participants from other EU-funded projects. The goal behind the attendance of these events is to present the project to relevant stakeholders. The below table summarizes an indicative list of events where the partners will examine participation (based on relevance, costs and available resources) in order to present and promote the DEFEAT project:

Table 2. An indicative list with events that partners will examine participation.

No.	Type of event	Title	Objective	Date	Place
1	Exhibition	Demonstration of robotic separation of CDW	Small scale application / demonstration of image processing and neural networks on CDW separation (D3.4)	May 2022	Frederick Research Center, Nicosia, Cyprus
2	Conference – Conference Paper	To be announced at a later stage – based on work progress and events calendar	Present the work related to the application of image processing and neural networks on CDW separation (D3.7a)	2022 (Exact date will be announced at a later stage)	International
3	Conference – Conference Paper	To be announced at a later stage – based on work progress and events calendar	Present the work related to the application of image processing and neural networks on CDW separation (D3.7b)	2022 (Exact date will be announced at a later stage)	International
4	Conference – Conference Paper	To be announced at a later stage – based on work progress and events calendar	Present the work related to the design and development of the composite material (D5.2)	2022 (Exact date will be announced at a later stage)	International
5	Conference – Conference Paper	To be announced at a later stage – based on work progress and events calendar	<i>Disseminate the work related to the characterization and properties of the developed material</i>	2022 (Exact date will be announced at a later stage)	International

			(D6.5)	stage)	
6	Workshop	Stakeholders' workshop for discussion of questionnaires contents and format	Organization of stakeholders' workshop to finalize contents and format of drafted questionnaires (D10.1)	May 2021	Nicosia, Cyprus
7	Workshop	Stakeholders and constructors' workshop for presenting the results of robotic separation of CDW	Organization of workshop with local stakeholders and constructors for exploiting the results of image processing and neural networks application on CDW separation (D3.8)	June 2022	Nicosia, Cyprus
8	Workshop	Stakeholders and consortium members workshop for exploiting the results of large-scale production of DEFEAT panels	Organization of workshop with stakeholders and consortium members for exploiting the results of large-scale production of DEFEAT panels.	February 2023	Latomia Pharmakas, Nicosia, Cyprus
9	Research Promotion Event	Valorization of construction & demolition wastes (CDW) for the development of innovative building materials	Event aimed at familiarizing the public with the world of science and research and at the same time strengthening the public image of researchers, as well as highlighting the important role they play in society	November 2021	Limassol, Cyprus

After the project's runtime, it is the intention of the consortium partners to make the novel DEFEAT results available to non-consortium members at commercial and competitive conditions to attract potential clients. The DEFEAT process is also promoted at the project's website and will be maintained and updated after the project's end. The website will act as a contact point for interested parties providing project summary and project participants information. It will inform the public with the ongoing and finished research activities; host the publications of the project for a general public (flyers and technical publications) and will provide links to research activities on prefabricated buildings & constructions, building & construction materials, CDW recycling, waste management, environmental management and the wider construction sector. Consequently, the website will also be the basis for dissemination.

4.6 Dissemination activities during the first 6Ms of the project

4.6.1 DEFEAT website & social media platforms

To ensure maximum visibility to the DEFEAT targets, objectives and results the consortium has set up a project website (Deliverable 2.4) registered in the HO company website as well as social media platforms. The project public website has been set up for the general public and can be found at the web address: <http://defeat.frederick.ac.cy/>. The project website is one of the main communication tools of the dissemination of the projects funded under the Republic of Cyprus, the Cyprus Research & Innovation Foundation (RIF) and the European Regional Development Fund.



Figure 1. Header of DEFEAT website



Figure 2. Footer of DEFEAT's website Homepage

Facebook, Twitter and LinkedIn accounts have also been developed and regularly updated. The links of each account are presented below:

- Facebook: <https://www.facebook.com/DEFEAT-105407267904655>
- Twitter: <https://twitter.com/DEFEAT85269725>
- LinkedIn: <https://www.linkedin.com/company/defeat-project>

The DEFEAT YouTube channel has been developed and can be found through this link: https://www.youtube.com/channel/UCwmVxkiHDbq4ZBWx1Uevh0g?guided_help_flow=5. The video described in section 4.6.4 DEFEAT video is already uploaded and can be found here: <https://www.youtube.com/watch?v=wLBsuwBCoDY&t=1s>. The Demonstration video of the operation of the innovative separation method that will be developed in the future by the Frederick Research Center will also be uploaded in DEFEAT's YouTube channel. Any other video prepared by the project's partners either as an educational material or as a promotional material will be uploaded and disseminated through our social media platforms and website.

The design of the website builds upon the following criteria and taking into account suggestions given in the EU Project Websites – Best Practice Guidelines, which offer better quality and user-friendliness to the project website, triggering higher popularity and provide better visibility for the project. Best practices include:

- Visual communication: use of photos and colors, web pages are easy to browse, information is kept short and links are included to websites and publications.

- Verbal communication: the website uses simple phrasing, no jargon is used in order to attract the widest possible audience, e-devices are user friendly.
- Visibility: maximum use of free or affordable methods to increase page ranking on search engines, Webmaster Tools provided by search engines to check indexing status, good cross linking between the different pages of site and other sites, add keywords to the web page metadata; use frequently used keyword search phrases both in the metadata and in the content's pages.
- Regular update of contents: the update of the current version of the webpage is regularly performed by STRATAGEM upon inputs of all the partners of the consortium. Moreover, the use of social media (Facebook, LinkedIn, and Twitter) are considered.
- Monitoring and feedback tools: the website includes: a counter of visitors or other statistical tools that will be used to measure the number of visits; a visitors' feedback form, to get a feedback on the usability of the web site and on the interest created by the project.

The website and social media are already updated throughout the project and contains a page with news items about the project. There will be a continuous update of the project website and social media platforms during the runtime of the project. The web and social media address will be widely advertised and it is intended to be of interest to potential end-users and to other interest audience, without revealing sensitive information.

4.6.2 DEFEAT leaflet

For dissemination purposes of the project, a professional and attractive leaflet has been developed and further updated in close collaboration with all the consortium partners.

Follow us!

 <https://www.youtube.com/watch?v=wLBsuwBCoDY>

 <https://www.facebook.com/DEFEAT-105407267904655>

 <https://www.linkedin.com/company/defeat-project>

 defeatproject.2020@gmail.com

 <https://twitter.com/DEFEAT85269725>

 <http://defeat.frederick.ac.cy/>



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

*DEFEAT Project's objective is the novel
separation and transformation
of Construction and Demolition Wastes (CDW)
into an innovative insulation fire resistant façade.*

Project Duration 01/07/2020 – 01/08/2023

Project Budget EUR 1,098,880

DEFEAT Project (INTEGRATED/0918/0052) is co-funded by the
European Regional Development Fund and the Republic of Cyprus
through the Research & Innovation Foundation.









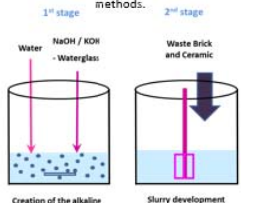
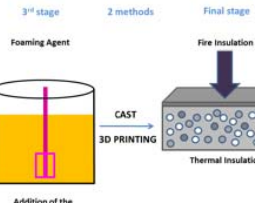







Figure 3. Project leaflet - cover pages

DEFEAT Innovative Technology

Image Processing and Neural Networks	Clean Material	Geopolymerisation	3D Printing	Final Product
<p>The image processing is performed with Machine Learning techniques (such as Neural Networks), which will be trained on a set of images that will be annotated with the waste type in which they belong. The result will be a model that will be able to classify a given waste image to the type it belongs.</p> 	<p>Both Recycled Concrete Aggregates (RCA) and ceramics will be obtained. The former will be used for the production of concrete, whereas the latter will be used for the development of the new thermal and fire insulation composite material.</p> 	<p>Low-cost innovative technology, with lower environmental footprint than cement industry. Both the thermal insulation and the fire resistant materials will be produced through the geopolymer technology. Optimization of the material density for thermal insulation will be achieved by chemical and mechanical methods.</p> 	<p>Production by precast method and 3D-printing, a novel method that offers faster and easier production and less waste generation.</p> 	<p>Development of the thermal insulation and fire-resistant composite façade, that will be able to be applied either on new or existing buildings.</p> 

DEFEAT Impact

<p>Social Impact</p> <ul style="list-style-type: none"> Enhance the state-of-the-art knowledge concerning the reuse of CDW in construction industry through the production of innovative materials. Boost the recycling process in Cyprus with all possible benefits and impacts. Utilization of CDW and return to the production cycle as a high value added material in the context of the Circular Economy. Developing products that have an impact on the building sector. 	<p>Economic Impact</p> <ul style="list-style-type: none"> Stimulate the economy by introducing new materials that increase competition. Developing innovative materials by leveraging a number of companies, creating growth conditions for the economy. Creating Net Added Value by investing and launching a high value-added product line and creation of a suitable environment for the further development of innovative geopolymers materials in Cyprus.
<p>Scientific Impact</p> <ul style="list-style-type: none"> Developing and transferring of know-how to the industrial level in the recovery of CDW through the development of a special type of composite material. Training of scientists and staff in an interdisciplinary environment related to materials engineering. First time in Cyprus and in Europe, where inorganic polymers for insulation and fire resistance from CDW will be developed. 	<p>Environmental Impact</p> <ul style="list-style-type: none"> Low energy consumption for the development of geopolymers. Low energy consumption for the waste separation. Reduced CO₂ emissions compared to cement and concrete industry. Decrease of a waste with a simultaneous positive impact on the environmental footprint created by the deposition so far.

Figure 4 Project Leaflet - inside pages

The main purpose of this first project leaflet is to provide to the public audience with a written and attractive project overview and a descriptive summary of the main project objectives. The leaflet has been published in the project website and additionally it will be distributed during the various conferences and the events that the consortium partners will attend. Apart from the general information and the summary about the project, the content of the leaflet includes the website address and basic information regarding the DEFEAT project consortium. The logos of all the partners are disseminated also through the leaflet. The circulation of the leaflet takes place in printed form e.g. by distribution at future conferences and other dissemination events, or in electronic form as there is an electronic version of the leaflet (PDF) that can be downloaded from the public area of website. As the DEFEAT results appear, this leaflet will be updated accordingly to inform the wider audience of the project achievements, while as well leading the way for the exploitation activities to happen after the project completion.

4.6.3 DEFEAT newsletter

The Newsletters are aiming to disseminate in the best possible way periodical updates of the results as part of the work carried out by our consortium. STRATAGEM has already prepared the first newsletter. The newsletter will include all sort of developments by the time of its distribution. It is important to point out that the information released will be verified multiple times to ensure no confidential information is released and all information, including text, graphics and schematics, is accurate.

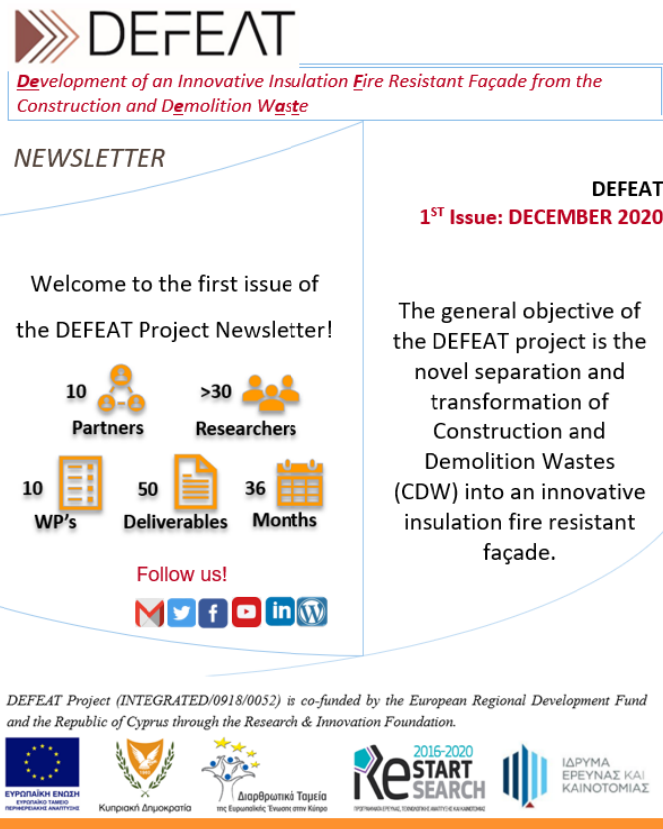
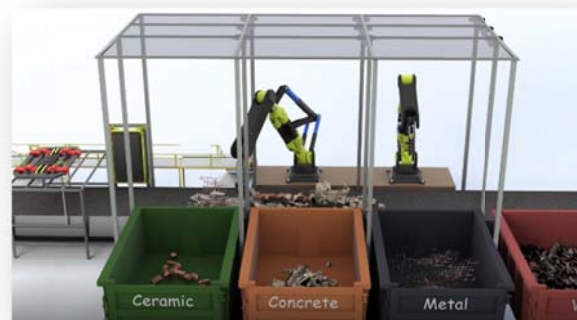


Figure 5. First page of the Newsletter #1

4.6.4 DEFEAT video

The first video was prepared by consortium before the beginning of the project and it is demonstrating in a very simple way the project scope and objectives. The video aims to reach out to a broader audience and promote the projects aim and findings via the YouTube platform. Additionally, the video will be posted on the website and to all the social media platforms.



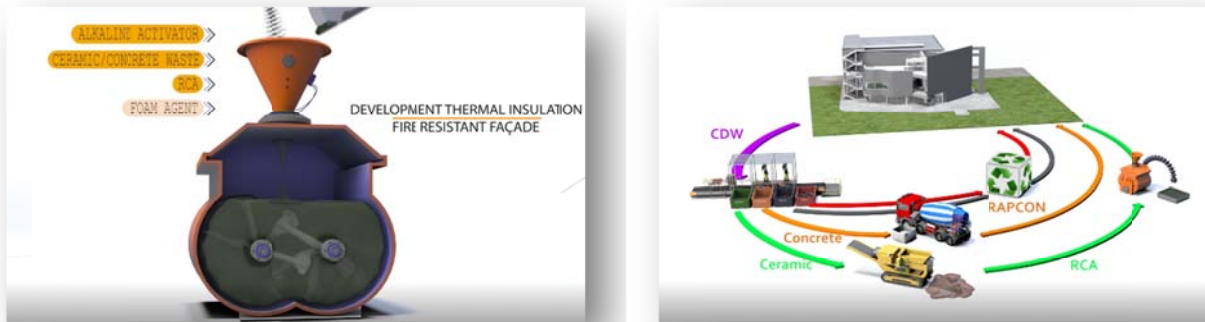


Figure 6. Screenshots from DEFEAT dissemination video

4.6.5 Participation at events and publications

During the first six months of the project and due to the weird situation due to COVID-19 pandemic, the consortium partners attended most of the events virtually. Additionally, a lot of events have been cancelled. The following activities such as events and publications took place the first 6 months of the project's runtime (see Appendix 1 for more information on the press publications):

Table 3. Communication and Dissemination Activities took place the first 6 Months of the Project.

TYPE	Status	Title	Objective	Type of Audience reached	Date & Place	Partner involved	Audience size (Approx.)	Website/Link
Press release - Article	Published on 15/09/2020	Press Release “Εναρξη έργου DEFEAT από το Frederick Research Center-Που στοχεύει”	Announce the beginning of DEFEAT project to general audience	General Audience	Cyprus 15/09/2020	Frederick Research Center	General Audience: 1000	https://www.brief.com.cy/etairika-nea/enarxi-ergoy-defeat-apo-frederick-research-center-poy-stoheyei
	Published on 15/09/2020	Press Release “Ανάπτυξη καινοτόμου υλικού από απόβλητα για εφαρμογή σε προσόψεις κτιρίων”	Announce the beginning of DEFEAT project to general audience	General Audience	Cyprus 15/09/2020	Frederick Research Center	General Audience: 1000	https://dialogos.com.cy/anaptyxi-kainotomoy-ylikoy-apo-apovlita-gia-efarmogi-se-prosopseis-ktirion/
	Published on 15/09/2020	Press Release “Ανάπτυξη καινοτόμου υλικού από απόβλητα για εφαρμογή σε προσόψεις κτιρίων”	Announce the beginning of DEFEAT project to general audience	General Audience	Cyprus 15/09/2020	Frederick Research Center	General Audience: 1000	https://inbusinessnews.reporter.com.cy/business/property/article/256723/anaptyxi-kainotomoy-ylikoy-apo-apoblita-ga-efarmog-se-prosopseis-ktirion

TYPE	Status	Title	Objective	Type of Audience reached	Date & Place	Partner involved	Audience size (Approx.)	Website/Link
	Published on 15/09/2020	Press Release “Ανάπτυξη καινοτόμου υλικού από απόβλητα για εφαρμογή σε προσόψεις κτιρίων”	Announce the beginning of DEFEAT project to general audience	General Audience	Cyprus 15/09/2020	Frederick Research Center	General Audience: 1000	https://www.kathimerini.com.cy/gr/okonomiki/epixeiriseis/anaptyxi-kainotomoy-ylkoy-apo-apoblita-gia-efarmogi-se-prosopseis-ktirion
	Published on 15/09/2020	Press Release “Ανάπτυξη καινοτόμου υλικού από απόβλητα για εφαρμογή σε προσόψεις κτιρίων”	Announce the beginning of DEFEAT project to general audience	General Audience	Cyprus 15/09/2020	Frederick Research Center	General Audience: 1000	https://paideia-news.com/panepistimio-frederick/2020/09/15/anaptyksi-kainotomoy-ylkoy-apo-apoblita-gia-efarmogi-se-prosopseis-ktirion-new/
	Published on 15/09/2020	Press Release “Ανάπτυξη καινοτόμου υλικού από απόβλητα για εφαρμογή σε προσόψεις κτιρίων”	Announce the beginning of DEFEAT project to general audience	General Audience	Cyprus 15/09/2020	Frederick Research Center	General Audience: 1000	https://www.sigmalive.com/news/mark-et-news/666734/anaptyksi-kainotomou-ylkou-apo-apovlita-gia-efarmogi-se

TYPE	Status	Title	Objective	Type of Audience reached	Date & Place	Partner involved	Audience size (Approx.)	Website/Link
								prosopseis-ktirion
	Published on 25/10/2020	“Καινοτόμα Προϊόντα από Οικοδομικά Απόβλητα”	Present the consortium's relevant research activities	General Audience	Cyprus 25/10/2020	Frederick Research Center, UCY, Pharmakas	General Audience: 1000	<i>Phileleftheros Newspaper, Sunday, 25/10/2020, p.25</i>
<i>Leaflet</i>	Has been developed	Leaflet	Presents the basic information and serves as the "business card" to be distributed by the project partners to any occasion.	Collaborator, EU projects, companies, Academic institution, Research Institutions and Innovative Enterprise, Municipalities, General audience	November 2020	STRATAGEM		<i>Can be found on the website</i>

<i>TYPE</i>	<i>Status</i>	<i>Title</i>	<i>Objective</i>	<i>Type of Audience reached</i>	<i>Date & Place</i>	<i>Partner involved</i>	<i>Audience size (Approx.)</i>	<i>Website/Link</i>
<i>Newsletter</i>	Has been developed	Newsletter #1	Gives an overview of the project's objectives, mission, impact and consortium partners.	Collaborators, EU projects, companies, Academic institution, Research Institutions and Innovative Enterprise, Municipalities, General audience	October 2020	STRATAGEM		Can be found on the website and den d to the subscribers
<i>Social Media</i>	Has been developed	LinkedIn account	Present results and achievements through the LinkedIn platform to enhance the communication and dissemination strategy.	Collaborators, EU projects, companies, Academic institution, Research Institutions and Innovative Enterprise,	September 2020	STRATAGEM		https://www.linkedin.com/company/defeat-project/?viewAsMember=true

TYPE	Status	Title	Objective	Type of Audience reached	Date & Place	Partner involved	Audience size (Approx.)	Website/Link
				Municipalities, General audience				
	Has been developed	Facebook account	Present our results and achievements through the Facebook platform to enhance the communication and dissemination strategy.	Collaborators, EU projects, companies, Academic institution, Research Institutions and Innovative Enterprise, Municipalities, General audience	September 2020	STRATAGEM		https://www.facebook.com/DEFEAT-105407267904655/?view_public_for=105407267904655
	Has been developed	Twitter account	Present our results and achievements through the twitter platform to enhance the	Collaborators, EU projects, companies, Academic institution, Research	September 2020	STRATAGEM		https://twitter.com/DEFEAT85269725

<i>TYPE</i>	<i>Status</i>	<i>Title</i>	<i>Objective</i>	<i>Type of Audience reached</i>	<i>Date & Place</i>	<i>Partner involved</i>	<i>Audience size (Approx.)</i>	<i>Website/Link</i>
			communication and dissemination strategy.	Institutions and Innovative Enterprise, Municipalities, General audience				
<i>Website</i>	Has been Launched	Project website	Present the project overview, objectives, mission, impact, results and consortium.	Collaborators, EU projects, companies, Academic institution, Research Institutions and Innovative Enterprise, Municipalities, General audience	December 2020	STRATAGEM		http://defeat.frederick.ac.cy/

<i>TYPE</i>	<i>Status</i>	<i>Title</i>	<i>Objective</i>	<i>Type of Audience reached</i>	<i>Date & Place</i>	<i>Partner involved</i>	<i>Audience size (Approx.)</i>	<i>Website/Link</i>
<i>Participation to an Event other than a Conference or a Workshop</i>	Organized on 27/11/2020	Online Research Promotion Event “European Researchers’ Night”	Event aimed at familiarizing the public with the world of science and research and at the same time strengthening the public image of researchers, as well as highlighting the important role they play in society	General Audience	Cyprus 27/11/2020	Frederick Research Center	General Audience: 1000	European Researchers Night (vfairs.com)

4.6.6 Internal Dissemination Activities

Internal dissemination activities include all the meetings in which the partners of the consortium gather to exchange ideas, disseminate the results from their work to the consortium partners and decide on the future activities.

4.6.6.1 DEFEAT Kick off Meeting

The DEFEAT Kick off meeting took place on the 1st of July 2020 virtually. The meeting was attended by all consortium partners.

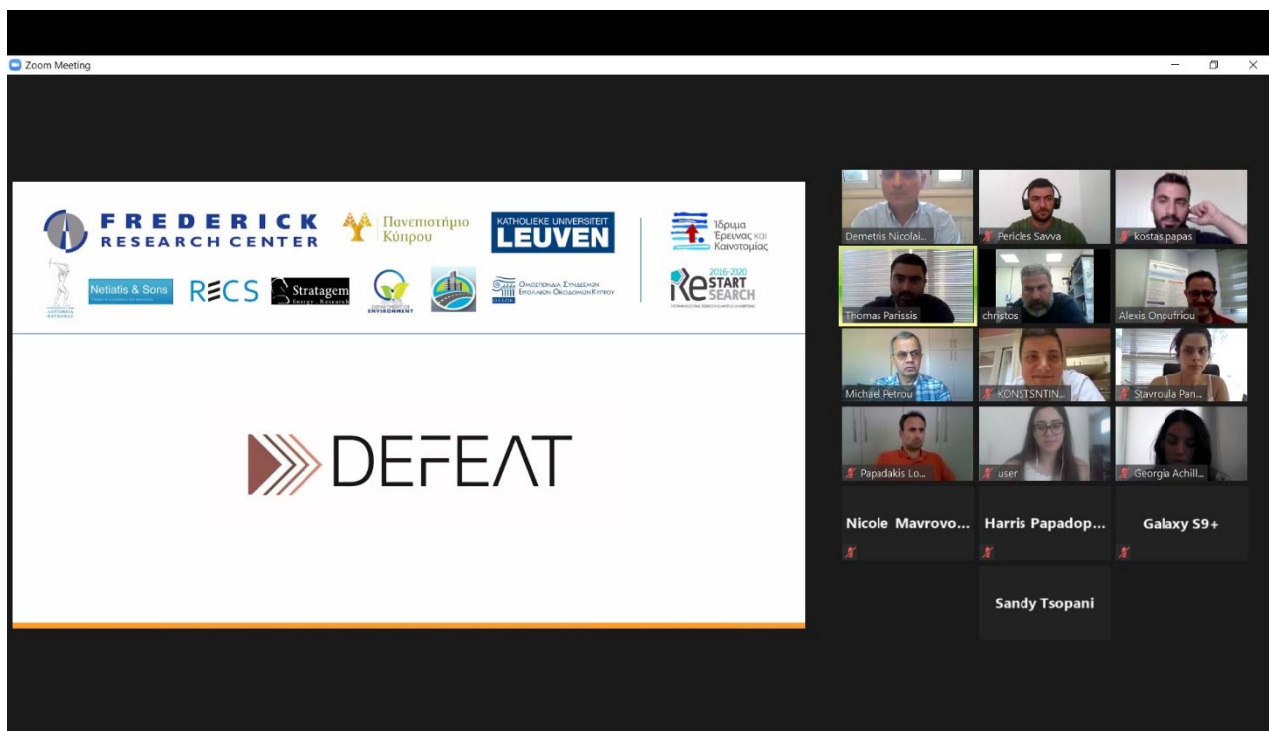


Figure 7. DEFEAT virtual Kick off Meeting

The goals of the meeting were to clarify contractual obligations – towards RIF and between partners (Consortium Agreement - CA), to present objectives, work structure (work packages), organization and management of the project, to clarify financial issues and administrative tasks (reporting), to present exploitation and management of the results and last but not least to initiate good communication, good collaboration, working relations and enthusiasm.

The meeting started with the coordinator presenting the scope of the project, the work packages, the milestones and the deliverables. After that, each partner presented their entity, their role to DEFEAT project and their expectations of the project's results. Additionally, issues related to the

commencement, management, finance and technicalities of the project were presented and discussed. Before the end of the meeting a fruitful discussion regarding the project's implementation was conducted.

5. Conclusions

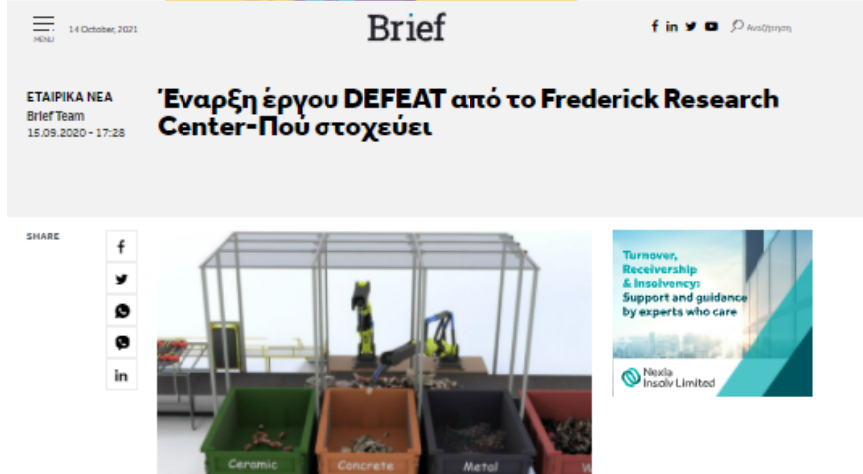
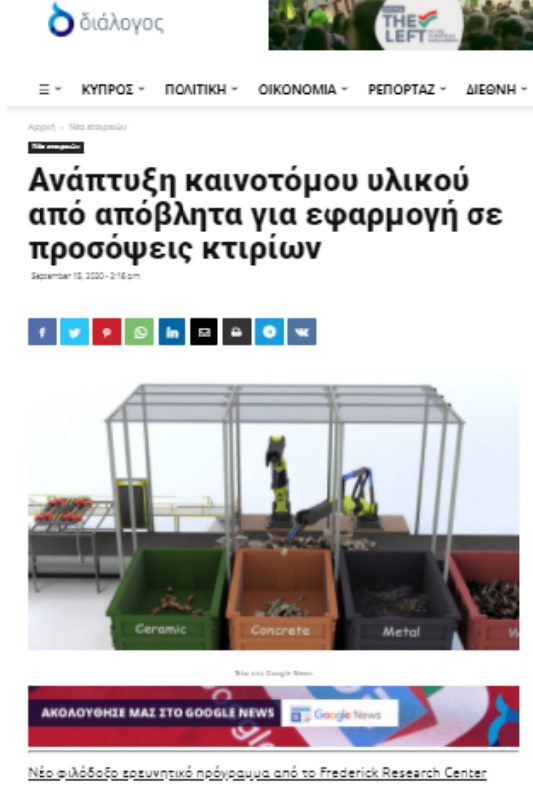
This document presents the general outline for the Dissemination Plan of DEFEAT project through its lifetime and after the end of the project. It is expected that as the project progresses, the consortium partners will participate in dissemination activities targeting different relevant audience. Also, it is expected that after the end of project, the partners will continue the dissemination activities of the project, participating in trade fairs, conferences, and other events relevant to the sector of the project, communicating the project, disseminating its results and searching ways to exploit the results of the project.

6. Acknowledgements

The authors would like to express their sincere gratitude to the Republic of Cyprus, the Cyprus Research & Innovation Foundation (RIF) and the European Regional Development Fund, for funding the research project entitled “Development of an Innovative Insulation Fire Resistant Façade from the Construction and Demolition Wastes” (Contract Number: INTEGRATED/0918/0052).



7. Appendix

Title	Website/Link
<p>Press Release “Έναρξη έργου DEFEAT από το Frederick Research Center-Πού στοχεύει”</p>	
<p>Press Release “Ανάπτυξη καινοτόμου υλικού από απόβλητα για εφαρμογή σε προσόψεις κτιρίων”</p>	

Title	Website/Link
<p>Press Release</p> <p>“Ανάπτυξη καινοτόμου υλικού από απόβλητα για εφαρμογή σε προσόψεις κτιρίων”</p>	

Title	Website/Link
<p>Press Release</p> <p>“Ανάπτυξη καινοτόμου υλικού από απόβλητα για εφαρμογή σε προσόψεις κτιρίων”</p>	 <p>The screenshot shows the OIKONOMIKH website with a headline in Greek: "Ανάπτυξη καινοτόμου υλικού από απόβλητα για εφαρμογή σε προσόψεις κτιρίων" (Development of a new material from waste for application in building facades). It mentions a research program by the Frederick Research Center. The image shows a robotic arm sorting waste into bins labeled Ceramic, Concrete, and Metal.</p>
<p>Press Release</p> <p>“Ανάπτυξη καινοτόμου υλικού από απόβλητα για εφαρμογή σε προσόψεις κτιρίων”</p>	 <p>The screenshot shows the παιδεία news website with a headline in Greek: "Ανάπτυξη καινοτόμου υλικού από απόβλητα για εφαρμογή σε προσόψεις κτιρίων" (Development of a new material from waste for application in building facades). It mentions a research program by the Frederick Research Center. The image shows a yellow excavator working on a construction site.</p>

Title	Website/Link
<p>Press Release</p> <p>“Ανάπτυξη καινοτόμου υλικού από απόβλητα για εφαρμογή σε προσόψεις κτιρίων”</p>	
<p>“Καινοτόμα Προϊόντα από Οικοδομικά Απόβλητα”</p>	