

EDP4WP1P3 Development and Diffusion of know-how on reusing quarry and marble processing residues and scrap

Disclaimer – this fiche provides some indications as to which funds could be relevant to ideas identified during the Entrepreneurial Discovery Process in the regions of Eastern Macedonia and Thrace, beyond those provided by the ROP. It is provided to stimulate further the development of the idea. However, it be intended as exploratory and non-exhaustive.

Title	EDP4WP1P3 Development and Diffusion of know-how on reusing quarry and marble processing residues and scrap
Short Description	The processing/management of marble debris and residues might include debris recycling, uses of by-products in areas like 3D printing, or in the construction industry (manufacture of synthetic marble, or chippings), or in organic cleaning of urban waste as soil improver / fertilizer or even production of new materials. Expected outcomes include a reduction of unprocessed waste or residues and more added value for quarries and marble processing plants.
PDL2 Participants	4 WG participants expressed interest in the idea (2 researchers, 2 government)
Under which TOs of the ROP does this project fall?	The activities within this project fall under TO 1b (Specific Objective 1 “Stimulate private-sector investments in research and innovation for the development of new products or services in RIS3 priority sectors”) of the ROP.
Knowledge and actors required	This idea would require the collaboration of the private sector for recording their needs, and the research institutes for exploring and suggesting innovation-oriented solutions offering comparative advantages in an international market.
How can ICT, as a key enabling technology, enhance this idea	Some alternative ways of using ICT in support of this idea: <ul style="list-style-type: none"> • Sensing Technology for Condition Monitoring • Sensing Technology of Occupational H&S and for Environmental Protection • Tracking Automation and Warehousing • Imaging for Inspection and Quality Control / Defect Detection • Physico-chemical measurements and analysis data management and decision support • Web-based B2B and B2C functions / orders and purchases • Automation and Monitoring in Waste Crushing • Automation in Waste/Slurry Recovery, Disposal and Management/Re-purposing • ICT-enabled, Augmented/ Mobile Support / Training • E-training for quarry and marble processing residues and scrap management
International dimension	External know-how is needed to cover the regional lack of expertise in advanced, marketable, attributes of marble products. It can be sourced in Greece (i.e., Attica) or abroad (Spain, Portugal). Some examples of international cooperation include: <ul style="list-style-type: none"> • The European Technology Platform Sustainable Mineral Resources

	<p>(ETP-SMR)</p> <ul style="list-style-type: none"> • MIPOLARE - Post-mined polluted landscapes reclamation by means of valorisation of different residues, including marble mud (Funded under LIFE09 ENV/ES/000439) • ProMine - Main objectives of the project include the development of new, high value, mineral-based (nano) products and the establishment of a new, cross-platform information group between the European Technology Platform on Sustainable Mineral Resources (ETP-SMR) and other platforms. <p>More in general, the proponents of the idea should familiarise themselves with the European Innovation Partnership on Raw-Materials, which offers information and networking opportunities as well as with the KIC on raw materials.</p>
<p><i>Which specific parts of the idea could be funded under H2020?</i></p>	<p>The participants agreed that this idea could lead to H2020 funding if the eco-efficient reuse of raw materials and/or the production of synthetic marble with advanced attributes were considered, both with a perspective of developing marketable end products. It must be noticed, however, that H2020 requires a very high level of innovation/</p> <ul style="list-style-type: none"> • Proponents of this idea should follow closely the calls under H2020 societal challenge 12. Climate action, environment, resource efficiency and raw materials. • As there is a strong market orientation for the idea, potentially, the H2020 Fast Track to Innovation scheme could be explored. • Potentially, the "Industrial Leadership" sub-section programme ICT LEIT ("Leadership in Enabling and Industrial Technologies could also be relevant in terms of skills diffusion in a virtual environment. The project could look at the call "ICT-22-2016: Technologies for Learning and Skills") as part of a large scale pilot. • Potentially, SME instrument could also be useful. Provided the adequate technology readiness level is reached, the following two calls should be taken into account: (1) SMEInst-11-2016-2017: Boosting the potential of small businesses in the areas of climate action, environment, resource efficiency and raw materials (2) SMEInst-02-2016-2017: Accelerating the uptake of nanotechnologies advanced materials or advanced manufacturing and processing technologies by SMEs. In the latter case, to focus should be on material aspects and the processing technologies. <p>Examples of FP7 projects include:</p> <ul style="list-style-type: none"> • SUSTAMINING – Project aiming at the development of a new methodology for selective exploitation according to demand, application of non-destructive geophysical methods, waste reducing production, etc. •
<p><i>Which other EU sources of funding could be</i></p>	<p>COSME - could help in supporting access to finance, access to market and entrepreneurship training.</p>

<p>relevant? For which elements of the project?</p>	<p>The European Investment Fund (EIF) could also provide a variety of financial instruments to support innovative SMEs.</p> <p>The LIFE programme, under its environment sub-programme, could prove useful, as the project could potentially be shaped into being a "Pilot", "demonstration" or "Best-practice" projects.</p> <p>Relevant examples of projects funded by life are RECYSLURRY and QUARESE.</p>
<p>Which other national sources of funding could be relevant? For which element of the project?</p>	<p>Some of the activities within this project are also eligible for funding through OP Competitiveness, Entrepreneurship and Innovation, TO 1b (Specific Objective 1.1 "Increase enterprise initiatives and collaborations to develop innovative entrepreneurship in line with the national RIS3") under the Materials-Construction technology focus.</p>
<p>Which other transnational sources of funding could be relevant? For which element of the project?</p>	<p>The Greece-Bulgaria Territorial Cooperation should be explored as, under investment priority 3d it supports the capacity of SMEs to grow in regional, national and international markets, and to engage in innovation activities. Furthermore, under investment priority 6f it promotes innovative technologies to improve environmental protection and resource efficiency in the waste sector, water sector and with regard to soil, or to reduce air pollution</p> <p>The multilateral cross-border cooperation "Mediterranean Sea Basin Programme" tackles, in priority 2, the Promotion of environmental sustainability at the Basin level, pursued through the preservation of natural common heritage, the reduction of risk factors for the environment, the improvement of energy efficiency and the promotion of the use of renewable energy sources.</p>
<p>Which other regional sources of funding could be relevant? For which element of the project?</p>	<p>Not applicable</p>
<p>Key barriers for the development of the idea</p>	<p>The main obstacles to be overcome are the lack of an integrated organisation in managing quarry and marble processing residue/scrap in the Region.</p> <p>In this sense, the proposal to create a marble cluster (see fiche EDP4WG1P4 Cluster for marble value chain) is a necessary complement to this project-ideas</p>
<p>Steps forward</p>	<ol style="list-style-type: none"> 1. The interested stakeholders should address their research proposals either to the ROP or to OP CEI. As well as explore, with NCPs and other relevant managing authorities, the opportunities offered by the afore-mentioned funds. 2. The ROP Managing Authority might want to fine-tune their calls so that international research consortia would be easier to be

	<p>organised and operate.</p> <p>3. The proposal should be developed in terms of financial and implementation plans, and the idea should be further specified and placed within the international background.</p>
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