

# MARBLETECH

“New educational approach of innovative technologies  
and eco-advances in the marble industry”

<https://marbletech.eu/>

PROJECT NUMBER #2021-1-IT01-KA220-VET-000028180  
SUBJECT KA220-VET\_2021



**Co-funded by  
the European Union**

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**Project**

# About the Ornamental Marble sector

- **Changing radically**  
requiring more specialized skills and qualification.
- **International widespread**  
thanks to the worldwide exporting and the geographical fragmentation of the process.
- **Growing demand for personnel trained**  
in environmental assessment, work safety and new technologies.



**Demand  
for new  
and specific  
skills**



"By 2025 almost half of all job openings in the EU will require higher qualifications."

**- New Skills Agenda for Europe**  
(adopted in 2016)



# Development of 3 main areas in the Marble Industry



**Technology**



**Sustainable  
development**



**Health  
protection**



# Technology

Companies **using old techniques and equipment** have very **limited access** to the international markets

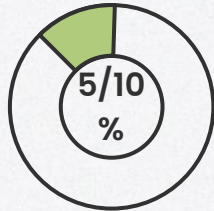
- technology contribute to reduce costs in a sector where the material to be transformed is hard and difficult to be processed.
- technology (Big Data, IoT, Block Chain) is crucial to meet the quality requirements of the international markets.



# Sustainable development

## Environment protection is a key issue in EU

The whole value chain must be controlled thanks to new technologies and knowledge related to LCA (Life Cycle Assessment).



### BIG AMOUNT OF WASTE

The final products, compared to the handled mass of rock vary from 5% to 10%.



# Health protection

- Monitoring of workers and machinery
- Improvement of health
- Safety technical analysis
- ...

EU partners in the project have a wide experience in developing and putting in practice, some of these procedures, as well as, in developing training materials for supporting their implementation in the Marble industry.





**2**

# Partners



### DESINOPE

Design, Engineering and  
development of advanced  
business solutions

*Alicante, Spain*



### CTM

Asociación Empresarial de  
Investigación Centro  
Tecnológico del Mármol,  
Piedra y Materiales

*Murcia, Spain*



### IMMC

Internazionale marmi e  
macchine Carrara

*Carrara, Italia*



### VC

Virtual Campus Lda

*Porto, Portugal*



### BU

Bogazici University

*Istanbul, Turkey*



### UNIPI

Università di Pisa

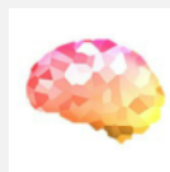
*Pisa, Italy*



### ITTI

Institute for technology  
Transfer and Innovations

*Plovdiv, Bulgaria*



### CRETHIDEV

Creating Thinking  
Development

*Attiki, Greece*



### CGS

C.G.S. di Coluccia Michele & C.

*Pisa, Italy*





**3**

# Activities

# Paper proposal: Marble Manager skills mapping for educational purposes

- **Gap:** Census/list of comprehensive, structured and updated (hard and soft) skills in the marble sector for re-designing Intended Learning Outcomes (ILOs) according to trending topics such as technological (Industry 4.0) and sustainable (SDGs) framework.
- **Proposal:**
  1. automatic extraction via Natural Language Processing (NLP) of the enormous amount of written information on the managers' skills (e.g., job vacancy, job description, Job databases) and merging with
  2. expert on the field survey on the skills mapping in Europe.
- **Results:** Marble manager skills mapped and organized in clusters of competences. Analysis of the the marble manager evolution (key skills) through the years with particular focus on technology and sustainability. Suggestion for updated ILOs definition in the marble sector.