



DIGIECOQUARRY
INNOVATIVE DIGITAL SUSTAINABLE
AGGREGATES SYSTEMS



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101003750

WHAT IS DEQ?

DIGIECOQUARRY aims to design, develop and validate in **5 pilot environments an Innovative Quarrying System (IQS)** comprising sensors, processes, tools and methods for data capture, processing and sharing to provide **integrated digitalised, automatic and real-time process** control for **aggregates quarries**.



Health & Safety and Security

Upgraded H&S and Security conditions for workers, avoiding their exposure to dangerous operations through automated and controlled processes.



Efficiency, Selectivity and Profitability

Enhanced Selectivity and Efficiency of the aggregates sites, thus increasing the profitability of the processes, ensuring long-term operational sustainability and viability.



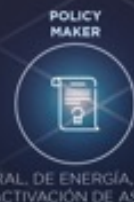
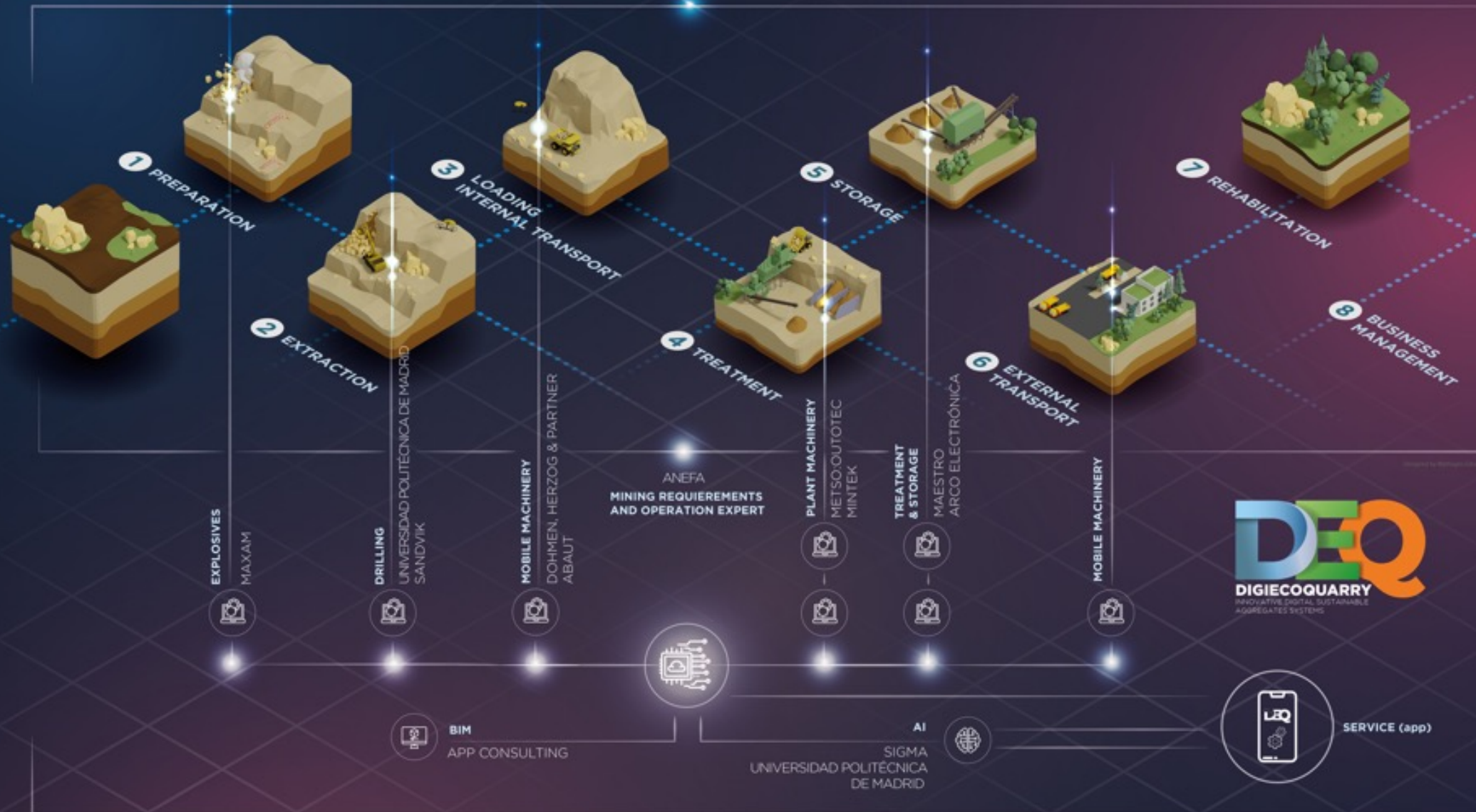
Environmental Impact

Maximised Sustainability and Resource Efficiency by reducing emissions, improving the management of water and fostering a sustainable supply of Raw Materials.



Social Acceptance

Improved social acceptance through the communication with policy makers, citizens and relevant actors to get them involved in the value chain



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OUR CONSORTIUM

CONSORTIUM PARTNERS: 25 organisations. 23 from 8 different EU countries + 2 international partners

QUARRYING INDUSTRY



TECHNOLOGY EXPERTS



RELEVANT STAKEHOLDERS



INTERNATIONAL ADVISORY BOARD



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OUR PILOTS

GRANULATS VICAT

Fenouillet



HANSON

Valdilecha



HOLCIM

Pioltello San Bovio



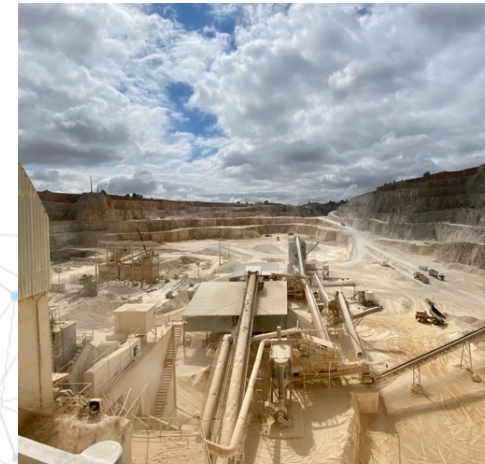
CSI

Mammendorf



CIMPOR

Alenquer



PUBLIC ACCEPTANCE



SOLUTIONS TO BE TESTED

- Mobile crusher w/ advanced noise and dust capturing.
- Continuous weighting systems.
- Monitoring sensors for mobile machinery.

DRILLING & BLASTING



SOLUTIONS TO BE TESTED

- Advanced rock mass characterisation.
- New drilling technology and explosives.
- Drill to mill concept implementation.
- Monitoring sensors for mobile machinery.

CRUSHING OPTIMISATION



SOLUTIONS TO BE TESTED

- Digital twin for crushing and screening optimisation.
- Software for the automation of the treatment plant.
- Continuous weighting systems.
- Monitoring sensors for mobile machinery.

ENERGY EFFICIENCY



SOLUTIONS TO BE TESTED

- Mobile equipment real time modelling.
- Geological deposit digitalisation.
- Geofence system.

TRANSPORT & STORAGE



SOLUTIONS TO BE TESTED

- Software for the automation of the treatment plant.
- Sensors for mobile machinery.
- Continuous weighting systems.

3D BIM modelling – H&S technologies – Environmental platform simulation – Artificial Intelligence algorithms – Social License to Operate



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THANK YOU!

<https://digiecoquarry.eu/>



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