

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. This will be translated into:



Health & Safety and Security

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



Environmental Impact

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



Efficiency, Selectivity and Profitability

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



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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#digiecoquarry













































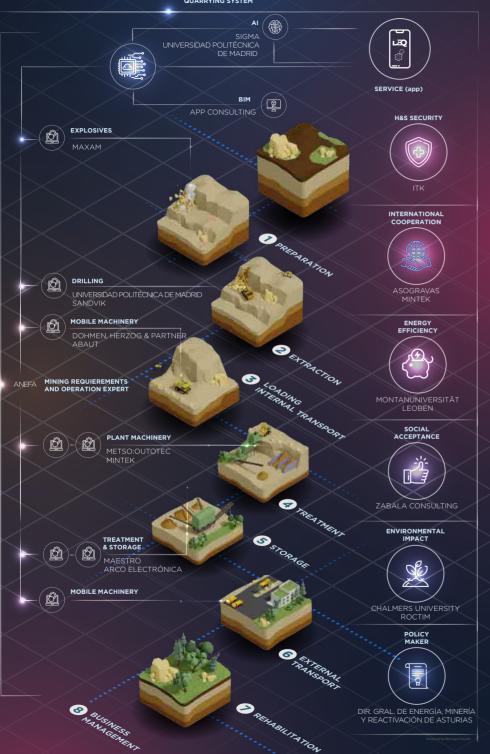






The future of quarries

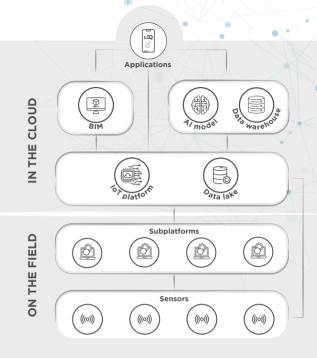




DIGIECOQUARRY addresses the quarry as a whole (from small up to multi-site quarries), comprising 8 processes:

- **1 Site preparation**: General Information and rock mass characterisation.
- **2 Extraction**: Clean and safe solutions for the drilling and blasting of aggregates.
- **3** Loading and internal transport: Safe loading and hauling processes within the quarry.
- **4 Treatment**: efficient, automatic, and flexible methodologies to recover aggregates, increasing the yield of recovered materials while reducing its environmental footprint.
- **5** Storage: Advanced methods, both between the quarry and the treatment plant and also after the treatment process.
- **6** External transport: Development of better transportation routes outside the quarry.
- **7** Rehabilitation: Minimisation of environmental impacts in the restoration of the quarry; through efficient management of internal transport from the extraction site and treatment plant to the restoration area.
- **8 Business management**: Process control enhancing by gathering, analysing and integrating large amounts of data.

DIGIECOQUARRY's data architecture



International Advisory Board

Composed by external experts and aggregates' relevant stakeholders, it plays a key consulting role. It provides external input, advice, and feedback when the project experiences difficulties during its execution

















