



Contribution ID: 15

Type: **Talk**

Feasibility study for ET Infrastructure for Sardinia site: location optimization, GIS-BIM three-dimensional modelling, multicriteria analysis

Tuesday, 9 November 2021 09:00 (30 minutes)

The talk describes the feasibility study activities related to the selection of the optimal configuration and localization of the ET infrastructures in Sardinia. This analysis requires the simultaneous evaluation of several scientific, territorial, environmental and geological/geotechnical aspects. For this reason, a different specific tools, interconnected with each other, have been implemented.

A GIS geo-database, to store and manage all useful maps and data and to carry out geospatial and geostatistical analysis to evaluate the coherence with technical constraints and scientific requirements, is integrated with BIM model adopted for describing the civil infrastructures.

The capability of evaluating different geometric configurations/scenarios is strengthened by the development of a multiple criteria decision-making tool, aimed to make all the relevant quantitative limiting factors compliant with scientific and engineering requirements.

By adopting this analysis approach the study for the construction of ET infrastructure will be performed using an iterative process developed through multiple phases of analysis, verification and validation, to optimize the design solution both for triangular and L-shape configurations.

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Session Classification: Civil Engineering, layouts, prospects