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## **Characterization of the subsurface geological settings of Firenze (Italy) for site effects analysis**

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Seismic risk analyses in the urban area of Firenze (Italy) could be particularly significant due to the huge artistic and architectonic value of the elements exposed at risk.

About 1100 stratigraphic logs have been studied to define an underground geological model, in which the distribution of the major sedimentary bodies and the bedrock pattern are highlighted. By taking into account thickness of fluvio-lacustrine deposits and bedrock depths, the study area is subdivided into zones characterized by a nearly homogeneous seismic response. The seismic characterization of each zone is carried out on the basis of geotechnical tests, geophysical surveys and literature data. The site effects analysis is performed through the monodimensional code "Shake". Resulting amplification functions are then compared with results derived from a seismic noise acquisition survey analysed through the HVSR technique. Preliminary results obtained through the numerical modelling and noise measurements show a general good agreement.