

Acronym – MetaMic

Title - Digital cultural heritage: a participatory metaverse of the unbuilt architectures of Michelangelo Buonarroti

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Department – Department of Architecture and Arts

ERC sector – SH5

Strategic emerging topic – Human Wellbeing

Cluster – Culture, Creativity and Inclusive Society

Principal Investigator – Federico Bellini

Organization of PI – University of Camerino

Iuav role – partner

Other partners – University of Florence, Consiglio Nazionale delle Ricerche (National Research Council)

Duration – 24 months

Start – 30/11/2023

Closure – 29/11/2025

Project budget – € 230 909.00

Iuav budget – € 19 096.00

Funding to Iuav – € 19 096.00

Source of funding – MUR (Ministry of University and Research) - Call PRIN 2022 PNRR

Description – MetaMic is a cross-disciplinary research project, involving expertise in the fields of history and graphic representation of architecture, communication design and IT. MetaMic aims to innovate digital tools for the valorisation of cultural heritage, in order to broaden its fruition to a wider range of users, from the general public and tourists, up to students and scholars. The case study is the unbuilt architectures of Michelangelo Buonarroti: the choice of cultural artefacts that never existed in reality, but only in the mind of an artist, is particularly challenging for a project that intends to build a purely virtual 3D reality. Michelangelo's unbuilt architectures, together with their original environments, will be philologically reconstructed on the basis of the original drawings and archival and iconographic sources; the philological reconstructions will be translated into digital 3D models, which will constitute the 3D environment of the platform; a dedicated interface will be designed, to make the platform immersive, experienceable in augmented reality, interactive and participatory (Interaction Design/User Experience); and finally, a digital ecosystem suitable for the project's objectives will be created, implementing the open-source ATON framework of the CNR-ISPC, which participates in MetaMic with its own Research Unit.

Objectives – The objective of MetaMic is to experiment the use in a platform dedicated to cultural content, of some of the communicative and IT features currently used in metaverses: immersiveness in a 3D environment, augmented/cross-reality, interactivity, participativeness, FAIR (Findability, Accessibility, Interoperability and Reusability) requirements. Therefore, MetaMic's users will not only be able to visit its 3D environments, but also interact with them, download and upload content, and exchange opinions with other users, making the platform a living place of cultural relations, not excluded some gaming experiences. For Michelangelo scholars, MetaMic can become a place for the exchange and production of knowledge, open over time to external contributions.

MetaMic proposes two key-objectives:

1. to perform the communicative abilities of digital platforms dedicated to the promotion of cultural heritage, by adopting solutions currently used in Metaverses;
2. to make a decisive advancement in the knowledge of Michelangelo Buonarroti's architecture, by reconstructing in digital 3D models a selection of his unbuilt projects, set in the original building and urban environments; each digital reconstruction will be associated with a complete and up-to-date multimedia database of historical sources (graphic and documentary), site surveys and bibliography.