

# D1.2 Specifications for database access by other internal tools and 3<sup>rd</sup> party tools

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An experimentally-validated multi-scale materials, process and device modelling & design platform enabling non-expert access to open innovation in the Organic and Large Area Electronics Industry (MUSICODE)

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## 1. Executive summary

The specifications for access to the MUSICODE Database by internal, third-party tools and users have been detailed.

Consortium internal tools, e.g. the main components of the MUSICODE platform as illustrated in Fig. 1, will access the Ansys GRANTA MI data management system, by using the Granta MI native Python API, MI:Scripting Toolkit. This is a licensed product, a proprietary Python package, which has been provided to partners upon request under a free of charge license agreement together with documentation, examples. A first training session has been also delivered.

Authorized third party tools, e.g. tools developed outside the consortium, would/should be able to access at least part of the content in the MUSICODE database. These tools include those implemented by marketplaces projects and/or other EMMC<sup>[1]</sup>/EMCC related actions. Since the access, in this case, should be more controlled, narrower, simplified, and possibly standardized, we propose the adoption of an API compatible, if not same, to the relevant APIs developed within the MarketPlace project.

Users non-programmatic access to the data management system is allowed by using a set of native web apps, which will be further tailored to fulfil the needs of MUSICODE users. A training session on the existing apps and how the documentation can be accessed has been shown to the whole consortium in a dedicated training session.

A fundamental agreement amongst key WP4 partners have been reached with respect to the authentication and authorization strategy for the MUSICODE platform. This strategy consists of two phases. First, we will use an out-of-the-box simple authentication mechanism for internal users, so that we can speed up developments and focus on the demonstrations of initial use cases. In the second phase, we will implement a Single-Sign-On, OIDC-based authentication and authorization, to provide a smoother user experience and simplify the access to the platform to external users.