



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 MUSICODE Data Management System (DMS) is a key component of the MUSICODE Open Innovation Platform, designed to store and manage a wide array of data with full traceability, in accordance with best practices in data management. The DMS accommodates simulation and experimental results, validated modelling workflows, and all associated metadata, ensuring data protection and retention.

The MUSICODE DMS allows for the implementation of advanced authentication, authorization, and version control strategies. These mechanisms ensure that data visibility and edit rights are appropriately managed, maintaining traceability even as data is updated. The adoption of OpenID Connect (OIDC) has further enhanced the system's security by enabling a robust single-sign-on mechanism across the platform's various components.

The DMS API, developed in the project, abstracts the native DMS API to promote the modularity of the MUSICODE Platform. By adhering to RESTful principles, the API facilitates data transfers between the DMS and external systems, offering a user-friendly interface that shields users from the complexities of the underlying system. This system-agnostic API also allows for seamless integration and interoperability between different systems, ensuring flexibility and scalability within the platform.