

D3.2 AEOLIX CONNECTIVITY ENGINE REFERENCE IMPLEMENTATION

Lead Beneficiary: ATOS S.A.

Authors: Alejandro García, ATOS; Elisa Herrmann, ATOS; Javier García,

Full deliverable available here: <http://aeolix.eu/deliverables/>

The present document, D3.2 – AEOLIX Connectivity Engine Reference Implementation, is considered as the materialization of the specifications that were designed in the previous document, D3.1 – AEOLIX Ecosystem Technical Architecture Specification. The previous deliverable defined how the AEOLIX platform would behave and the different modules that would be part of its architecture. At the current stage, there is a materialization of that architecture in the form of MyAEOLIX together with the other big blocks which are the Identity Manager (IdM) and the SDK, which implementation is presented in the current document but its usage is specified in (D3.5 - AEOLIX API and SDK).

The AEOLIX platform provides a data sharing network between different logistic stakeholders that are called Members and allows each of them to share pieces of information in a secured way and also by managing, in every moment, which other Member can access to the information; in other words, manage data governance. Besides, the AEOLIX platform also provides a catalogue of logistic IT services, which is called Toolkit, and which can be accessed by each member of the AEOLIX ecosystem.

To enable the data sharing process, together with the governance part and the interoperability, each of the Members must perform a configuration process of his own network. This is done through MyAEOLIX solution. My AEOLIX contains the core functionalities of the AEOLIX platform since it is needed to provide the whole configuration of the data sharing network: who are the Member's users, which data sets will be provided through the network, which Members will be able to subscribe to the information that is being published, which services are available to consume and how it is possible to request access to them...

And after making the proper configuration, there is a second part of the story that needs to be done: integration within legacy systems or applications. This is the part of the process where the AEOLIX SDK becomes important since this integration must be done by using it to publish information to a data source and/or to subscribe to a data source. Both steps are mandatory to perform, the AEOLIX SDK cannot be used without configuring the network and the other way around, if the network is configured but there is no integration with the AEOLIX SDK, no data will be shared.

As stated before, (D3.5 - AEOLIX API and SDK), focused on the configuration process and how the new Members must proceed through MyAEOLIX when they get an AEOLIX account and how they can perform their integration with the AEOLIX SDK. Nevertheless, the current document tries to explain, technically, how, each of the modules that are involved inside the MyAEOLIX solution and inside the SDK work. Why an Identity Manager is needed, the functionalities that provide the layers that have been built to interact with it and also the internal modules that provide all the MyAEOLIX functionalities: user management, data sharing capabilities, toolkit services registration, application management and SDK (including some operations like subscriptions management).



D3.2 AEOLIX CONNECTIVITY ENGINE REFERENCE IMPLEMENTATION

The document also covers how the security has been carried out. The security mechanisms that have been implemented to deliver a safe and secure data sharing platform, that provided data encryption and secured connections. It also explains the algorithms that have been used and how.

To conclude, it is explained how a continuous integration environment has been prepared to deliver a scalable platform, to implement quick modifications on its functionalities and to deploy all the defined modules in a cloud environment in an easy and controlled way that will help to maintain a robust and operational platform.

