

OSME Showcase: OSME IT-Platform – Integration as a Service

OEMs prefer a modern integration architecture and efficiently built integration with APIs. Meanwhile, there are many SME companies without the competencies to offer API-based interfaces or an integration built by themselves. Integration as a Service is a cloud platform and toolbox enabling SME companies without a corresponding platform of their own, to provide API interfaces and related integration capabilities.

API management enables companies to present the APIs they have available for their ecosystem partners in one place and in a harmonized way. For each API there is a description and the opportunity to ask for access to the API. Technically, API management provides centralized services to manage, monitor, and report the usage of APIs.

Identity and access management is an obligatory service layer to confirm the identities of data consumers – either a person or an application – and govern their access to the data and services of the API requested. The decision for data exposure is built in the application where the data is located, but the identity and access management layer presents a harmonized way to join the access control.

The **data transformation service** is implemented based on the OSME data model as the **internal, intermediating data model**. Any message requiring transformation is first translated from the data provider's data model to the OSME data model and then to the data consumer's data model. With a larger number of companies and data models involved, this principle will save considerable work in creating and maintaining transformation rules.

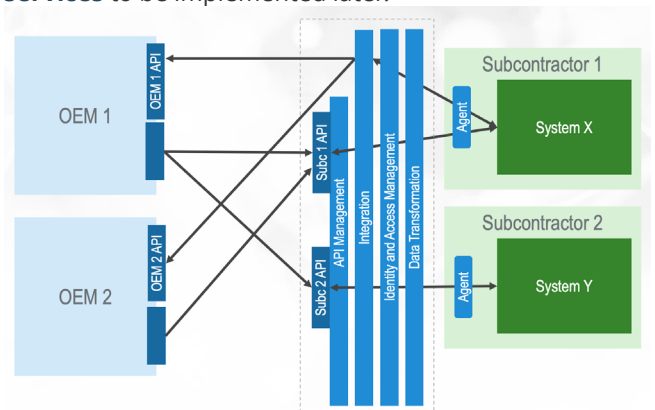
During the integration service connecting the APIs of a company to the platform, it is essential for the company to provide their data to the partnering companies **in a safe way**. The data may be located in legacy systems with various integration capabilities or in cloud applications located in several cloud environments. The integration service technically combines these various sources into one harmonically presented set of APIs.

The **integration service** connecting to APIs of other companies is required to build integration where a company actively consumes the APIs of other companies.

Creating the concept of the **integration platform** has been an important topic in the OSME from the beginning. There has been IT-integration between companies for decades, but the target in OSME has been **to lower the barriers and make it less time-consuming and more affordable to implement integration, both for OEMs**

and for SMEs. To reach this target, most OSME companies have contributed in some way, be it by offering the necessary user requirements, Wärtsilä offering the point of view of an ecosystem leader and the partnering IT companies as well as VTT contributing by offering IT capabilities.

The API management service has not been implemented by Roima yet, but it is currently in the planning phase. Depending on later decisions, the API Management may be divided into **minimum viable services** and **advanced services** to be implemented later.



Impacts:

- Higher integration capabilities for OEMs in the ecosystem and faster integration building with SMEs
- More affordable API-based integration capabilities for SMEs and benefits of the data sharing economy
- Easy data sharing capabilities for manufacturing ecosystems and new ways to build data-based collaborations between companies in the ecosystem

Collaborators: Roima Intelligence, Wärtsilä, Synocus, VTT, Fliq, Leinolot Group, Fastems

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For more information on the Open Smart Manufacturing Ecosystems initiative, please visit mexfinland.org/osme

