

FEDeRATED Platform Services

Business and authorities both operate and maintain IT systems providing (digital) services to end-users in support of logistics and transport (business) processes. These “platforms” provide services for the handling, processing and/or distribution of data between users of the system i.e. on a commercial, community, enterprise (organisation) or sector-wide level, etc. There are also “platforms” which provide specific services in support of the above through the provision of e.g., data exchange and connectivity solutions.

Stakeholders interface with each other via different implementation guides and/or different IT systems supporting these implementation guides. In addition, there are many platforms, each with slightly different functionalities, and their number is growing,

There is a multiplicity of different open and defacto standards, supported by a variety of platforms and solutions, but still not leading to seamless information sharing amongst all stakeholders in the supply and logistics chain. There are still too many bilateral agreements, proprietary solutions, and different platforms preventing a data sharing solution similar to the Internet functionality.

The Internet functionality is one registration and connection to only one platform or solution of choice provided by one of the many service providers to be able to do business with all relevant partners. The objective is to create such a commodity based on the leading principles.

The template hereunder identifies the services that a platform has to provide¹.

Federated platform services	Definition
Agility service	A class of Logistics Service API supporting cancellation of an order due to unexpected conditions like delays, losses, or theft of cargo and/or vehicles and potentially triggering re-planning of (part of) a logistics chain.
Booking service	The class of Logistics Service API for negotiating of prices and conditions to execute a logistics service (e.g. according a timetable like a voyage scheme) or conclude a framework contract according customer requirements.
Business process choreography	The sequence of interactions between any two organizations. A business transaction relating to a business service typically has a transaction choreography.
Common APIs	A class of platform services to support the Logistics Service API , e.g. communication, data transformation, reliable data sharing, secure data sharing, data storage.
Connection Service	The class of Logistics Service API to integrate ICT back office systems with the selected platform services by means of an Access Point .

¹ Source: FEDeRATED Milestone 2 report, Interim MasterPlan, page 39, paragraph 6.2

Federated platform services	Definition
Federative platform protocol	The set of agreements for data sharing between platforms to support platform services
Logistics Services API	A class of platform services implementing the transaction choreography.
Logistics – or business service	The set of values of properties of a (composition of) business activity(-ies), e.g. a transport service or a transport service that is further decomposed into a logistics chain by its provider.
Information services	A class of VAS APIs to access (open) data to support a business transaction, e.g. weather forecast data, traffic information, corridor management, ETA calculation service, and CO ₂ shipment/package monitoring service. Information services support resilience and agility.
Ordering service	The class of Logistics Service API for actual execution and detailed planning of a logistics service according prices and conditions of a booking or a framework contract.
Platform Service	The set of Logistics Service API , Common APIs , Value Added Service APIs , and Platform Support APIs whereby the federative platform implements the transaction choreography.
Platform support APIs	A class of platform services to provide trust and support billing and payment of the use of platform services, e.g. audit trail, logging, access control, monitoring.
Quality of Service	A set of parameters that specifies both functional and non-functional features of a service, e.g. its reliability, performance, and availability.
Quotation and marketplace services	The class of Logistics Service API to search and find (a chain of) logistics services meeting customer demands. These class of platform services need to implement a high precision and recall, all logistics services, timetables, and spare capacity meeting customer demands have to be found.
Registration Service	The class of Logistics Service API that enable an end-user to use the federative platform via its single entry point , e.g. publishing its logistics services , timetables, and spare capacity, to receive an identity as a trusted end-user, and to select the required platform services .
Resilience service	A class of Logistics Service API assessing risks in completion of particular supply – or logistics chains or individual transport legs based on information services . Resilience services implement supply chain resilience.
Semantic model	Concepts and their associations specifying data semantics of a particular domain or (sub-)system.
	<i>Synonym:</i> ontology, data model
Value Added	A set of services specified by APIs that are developed by third parties and

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Service APIs (VAS APIs)	are available for users to embed in the Logistics Service API . Identity - and Authentication Provision, Data Transformation, ETA (Estimated Time of Arrival) prediction and (dynamic) chain planning are examples of VAS.
Visibility service	A class of Logistics Service APIs providing details of the execution of a logistics services and its planning (including for instance a VAS API for ETA prediction at the requested destination or Carbon footprint tracking) according an agreed transport plan.