# SUNFISH: the Cloud *Federation-as-a-Service* solution for the Public Sector

Benefits for the Public Sector of moving towards cloud computing have become clearer and clearer in the past few years: it provides wider flexibility, cost effectiveness, redeployment of IT personnel and sustainability. What a traditional use of cloud computing infrastructure does not provide is the security guarantees on data management and above all the possibility of making interoperable secluded private clouds, creating so-called *Cloud Federations* whose governance is democratic and distributed across all clouds.

To address these daunting challenges and realising a first time Cloud Federation platform, the Italian Ministry of Economy and Finance has been leading, starting in January 2015, a Consortium of eleven organisations from the private, public and academic realm, for the creation of a platform that would allow sharing of IT resources, information and services in a simple, fast, flexible and above all secure manner. Three years on, and the SUNFISH Project, funded by the EU in the context of Horizon2020 R&I actions, is approaching its final steps.
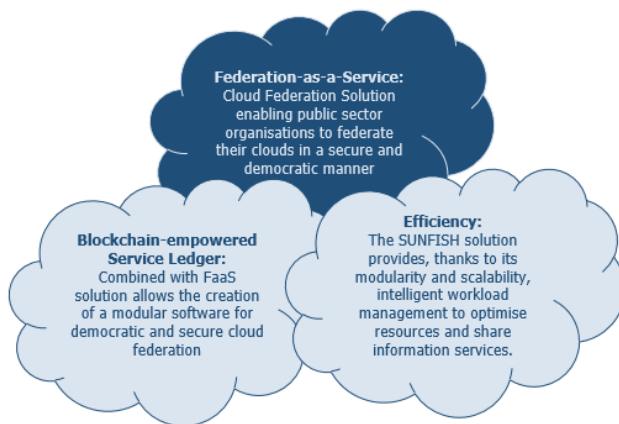
SUNFISH stands for "*SecUre iNFormatIon SHaring in federated heterogeneous private clouds*" and, as its extended name points out, the solution enables the secure federation of private (and public) clouds. The SUNFISH Platform, developed following a user-centric approach, contributes to the promotion of "inter-country" and "cross-border" collaboration among public administrations and provides an innovative solution, which allows cloud federation in a safe manner.

The SUNFISH project coined **Federation-as-a-Service (FaaS)** a secure-by-design Cloud federation solution that enables public sector organisations to federate their clouds in a distributed and democratic manner, thanks to an underlying **blockchain** empowered infrastructure named the Service Ledger.

SUNFISH practicability has been tested on the three public administrations, which were partners of the Project, and shaped around their real needs. These were: the Italian Ministry of Economy and Finance, the Maltese Ministry of Finance and the South-East Regional Organised Crime Unit in the UK. The use cases are effective demonstrators of the how the platform and its components work and how the public sector can take advantage of its technology. The solution is therefore primarily addressed to public administrations but the platform and its components in particular, other than providing the possibility for academic and research institutions to build on the Consortium findings, can be exploited by cloud providers to boost their offer for the public sector.

The SUNFISH project will be reaching its conclusion at the end of December 2017. To find out more, visit the Project website www.sunfishproject.eu. Here a wide range of material is available, including brief presentation videos, project White papers, technical demos as well as a direct link to an *ad-hoc* "SUNFISH Platform Accessibility Interface", where project key outcomes – including software components, APIs and related guidelines and documentation – are openly accessible and available.

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