

Transforming Airport Operations through Multistakeholder Data Sharing over Next Generation Data Spaces.

Konstantinos Latanis (Suite5 Data Intelligence Solutions Ltd, Cyprus),
 Sotiris Koussouris (Suite5 Data Intelligence Solutions Ltd, Cyprus)
 Spiros Koussouris (Suite5 Data Intelligence Solutions Ltd, Cyprus)
 Nikos Papagiannopoulos (Athens International Airport, Greece)

Abstract

Airport operations rely on complex data exchanges between various organisations and stakeholders to deliver services efficiently. However, these exchanges are often hindered by a lack of perceived benefits for those involved. The PISTIS project, funded by the EC, addresses this challenge by introducing a federated data sharing and monetisation platform. This platform promotes data sharing and trading, aiming to enhance airport operations, among other areas, through improved data integration and increased trust among stakeholders.

Methodology

Leveraging recent advancements in data spaces, PISTIS employs state-of-the-art technologies such as distributed ledger technology, and AI-driven data quality assessment and monetisation. This approach enables the creation of a federated data discovery and sharing platform that supports collaborative data sharing among diverse stakeholders in the **Aviation** domain. Athens International Airport is a core project demonstrator within the Mobility and Urban Planning Demonstrator Hub.

Expected benefits of integrated data sharing

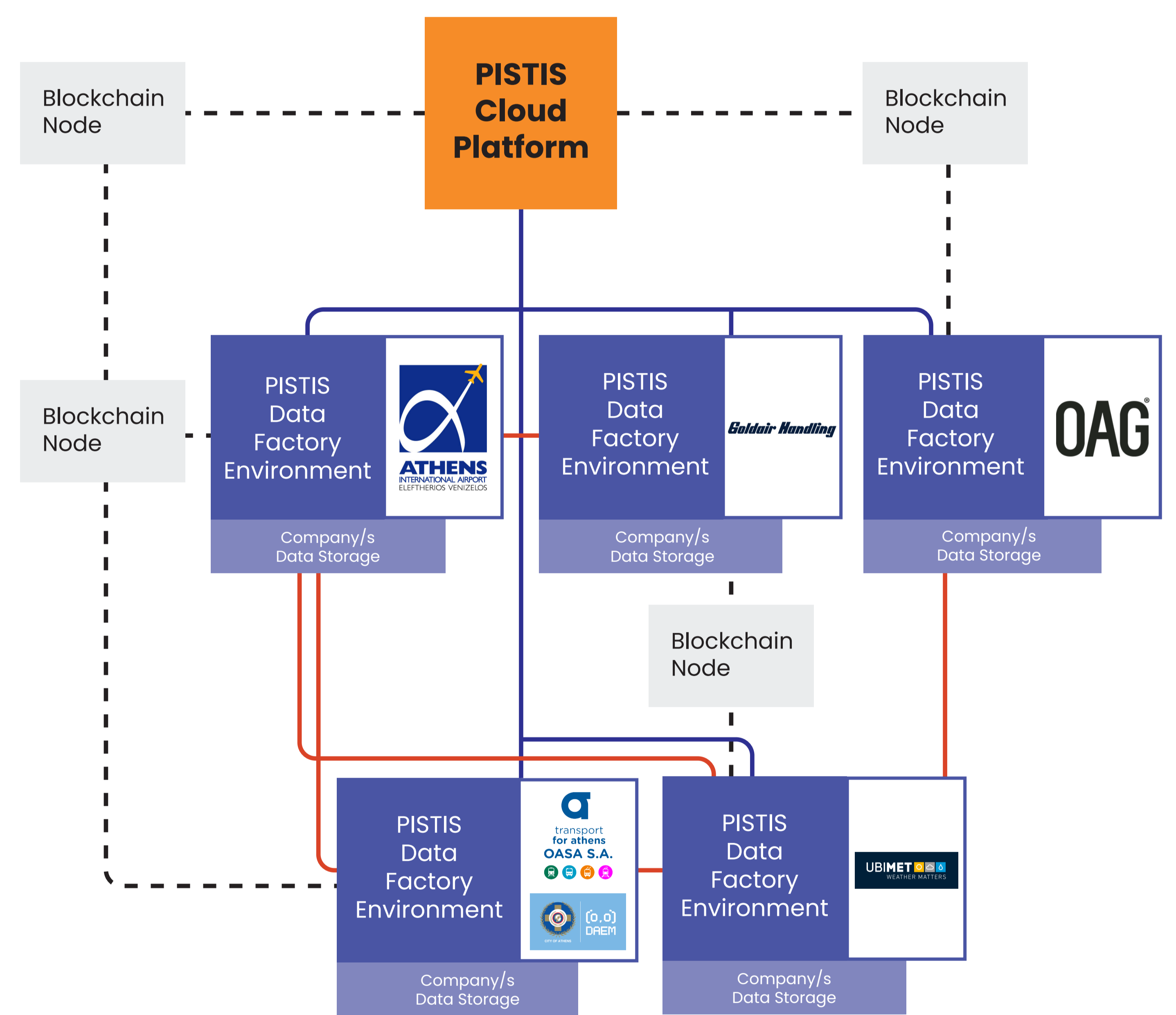
PISTIS is an ongoing project focused on improving airport operations through robust data sharing. Key areas of investigation include:

- baggage handling,
- transfer passenger management,
- aircraft turnaround processes,
- public transportation planning.

The project aims to demonstrate how integrated data exchange can enhance operational efficiency, detect irregularities, predict delays, optimise scheduling, and ultimately improve service quality for all stakeholders.

Information Flows

- Control/Metadata Flow
- Peer-to-Peer Data Exchange
- - - Lineage/Sharing/Transaction Information



Conclusions

PISTIS seeks to showcase the benefits of its federated data sharing and trading platform in enhancing airport operations (among others) at various stakeholder levels. The project emphasises the importance of building trust among stakeholders and provides a scalable model for data-driven improvements in complex operational environments.



Project website
www.pistis-project.eu

 PISTISproject

 PISTISproject

 @PISTIS_project

Consortium



This project has received funding from the European Union's Horizon Europe innovation action programme HORIZON-CL4-2022-DATA-01-04 under Grant Agreement n°101093016