Infrastructure management Digital Twin platform, compatible with high level of immersive technologies, like AR/VR and Mixed Reality.

A/RporTWIN is a new generation management platform focused on Airport Management and Airport’s operations. It acts a single-source of truth for different airport related operators. Some of its features are VR/AR and Mixed technologies compatibility, third party data integration and rich information representation.

A/RporTWIN is the next digital twin platform for infrastructures. Designed from the ground up, it will provide a common data visualization and analytical tool to be used by infrastructure’s managers and operations teams. It will not only represent the infrastructure itself but also will integrate different related data sources that are useful during day-by-day operations.

In the case of airports, third party standard data streams and airport’s inside data sources are going to be included. It will not only support standard 2D visualizing tools, but it will be compatible with AR/VR equipment as well, depending on the selected use case. As an analytical tool, simulations are going to be evaluated as part of the scope of the development.
Competitive Advantages

- Unified and generalized web based platform for Airport management operations.
- Natively compatible with extended Reality technologies.
- Modular design, mixing both geometrical data with streamed and historical data.
- Supporting both realtime and discrete data streams.
- Third party integrated data sources.
- Based for future capabilities like analytics or simulation.

Target Markets

- Airport management.
- Heavy duty or critical Infrastructures management (i.e. highways, railways and rolling stock, etc.).

Road Map

2020
- First product development and first beta testing/pilots deployments.

2021
- Commercialization and product improvements.

Leveraged Technologies

Web 3D and WebVR current standards, enabling high-quality model representations, on-demand. FIWARE and NGSI standards, for communications between modules and data contextualization (FIWARE foundation is defining 2.0 version for the standard). Current digital-twin platforms are based on proprietary software that is very limited in relation to Augmented Reality or Virtual Reality capabilities.

Status/Traction

- Pilots will take place initially on Aberdeen, looking to extending it to another infrastructure / locations.
- With partners: AGS is a Ferrovial’s participated company in charge of the management of several UK based airports (Aberdeen, Glasgow and Southampton).

A/RporTWIN initiative’s partners are:
- KTH, Royal Institute of Technology in Stockholm
- UPM, Universidad Politécnica de Madrid
- Fundación Ci3
- AGS Airports.

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