



Architectural components:

- V-SENSE:** The «sensing» element of the system, equipped with GNSS receiver and ADS-B receiver. Its main role is to provide the measurements;
- V-SERVER:** The central node of the system, granting access to all users and managing the centralised database. It performs the validation of the signature and provides information to the consumer;
- V-DB:** Relational database used to manage all the information;
- V-TRACE:** The SW installed at customer site. It allows the operator to perform all the needed local functions, including request of signature certification; It manages the QR scan equipment (manual | automatic);
- The App:** The smartphone application used by the consumer to get – through the V-SERVER – added value information, which is stored in V-DB; The **App** for smartphones is available for installation in the PlayStore of Google. Even other QR readers (e.g. the App “BAR CODE scanner”) can be used to access the certification service (Android and iOS). However, in this case the returned information and the user experience are both limited.

Main Use cases:

- Firstly, the system regularly computes and validates the position of the GNSS and ADS-B receivers through the processing of data collected on site, combined with auxiliary data from reference sources. This is a background task performed every minute or couple of minutes;
- Secondly, when a specific event has to be recorded, the tag on that product is read asynchronously, and the local PC sends a certification request to the service centre. The result of the certification request is stored in the database and sent back to the requester;
- The last major operational scenario is related to the tag reading process: as soon as a consumer reads the tag via the dedicated App, the system returns all the relevant information and the certification status.

