Keeping an eye on processes

Real time control of Logistics processes: **a new, more direct and advantageous way of monitoring what is happening in the field:**

• What is the travel temperature of my goods? Are there unusual situations requiring my intervention?
• Has an intrusion occurred in the loading area of the vehicle? Are the anti-theft containers in which my goods are travelling still safely locked?
• Which trailer is attached to the tractor? Are my goods being unloaded in a place I approved? What has been removed from the vehicle in the unloading bay? Who got on my minibus at the last stop?

The extension of the Internet to the world of physical objects and places, the Internet of Things (IoT), **is the innovative method of exploiting the Internet for an effective use of all data collected in the field**.

TERTIUM Technology, a specialist in IoT "on the road", has developed a number of **solutions supporting logistics executives and operators in performing their everyday activities**.

In particular, TERTIUM Technology provides wireless devices and cloud services dedicated to:

• **Refrigerated transport logistics**
• **Electronic sealing**
• **Tracking of persons or goods**

MWS Fleet Sensors and **MWS Fleet Service** are the main modules of the Mobile Wireless Sensors platform. **Having the ability to be seamlessly integrated with fleet management systems,** TERTIUM Technology products are the ideal accessories for increasing the amount of useful information detected by these systems.

The MWS system has been in the market for over four years and the experience matured during this time made it possible for TERTIUM Technology to develop a variety of devices and services highly suitable for this specific field of application.

MWS Fleet Sensors devices are distinguished by the following particular features:

• **easy to install**, no wiring needed, compact dimensions and low weight;
• **low power consumption**, battery life lasts up to 10 years;
• **secure data acquisition**, all data stored in the non-volatile internal memory.

Particular attention was paid to the development of **MWS Fleet Services**, as they are the daily hub of the MWS system for customer interfaces.

The available service levels are as follows:

• **SDK** – first level (low) API oriented towards the development of applications or to the integration of the MWS system with existing applications. **Developers have the maximum flexibility,** starting from the management of the TT-RFID protocol by which all TERTIUM Technology devices are driven.

• **Web Service** – second level (high) API having the same target as SDK. The substantial difference is due to the **encapsulation of low level functions** (in particular the management of the TT-RFID protocol) and to the management of the **data available in the database via the Internet** without the need to download data from devices in the field.

• **Web App** – first level of **packaged and ready-to-use applications**. They are basic, **easy-to-use solutions** for keeping individual vehicles under control. Some features are available at an aggregated level for the whole fleet.

• **Custom App** – second level of **applications entirely customized** to specific customer requirements.

IoT on the road

Service levels

TEMPERATURE

ELECTRONIC SEAL

TRACKING

0110

SDK

WEB SERVICE

WEB APP

CUSTOM APP