



Project Field

**SECURITY AND AUTOMATION**

Carried out for

**FIRE DEPARTMENT PROVINCIAL HEADQUARTERS**

Requirement

**CONTROL AND MANAGEMENT OF FUEL SUPPLY**

## **PROFILE**

The provincial headquarters of civil service, guarantees social defense, public rescue and fire prevention and extinction service, as well as other activities assigned by the Home Office.

Rapid interventions, competence and experience achieved in civil protection are fundamental in the rescue operations offered to the populations struck by natural calamities or great disasters. In addition to the maximum effort and professionalism demonstrated with every occasion, by all the members of the Staff, there are also efficient facilities and technologies that resulted from daily experience in rescuing.

## **REQUIREMENT**

Taking into consideration the high number of vehicles and their importance in achieving the assigned activities and duties, the client needed a modern and efficient tool for control and management supply.

The system had to accomplish two precise objectives:

- Control fuel consumption – and related costs – of the company vehicles;
- Obtain a rapid evaluation of fuel supplies.

## ACHIEVED PROJECT

In order to satisfy the client's requests a (hardware and software) project has been achieved, consisting of:

- identification of the user that makes the supply, hence, the use by authorized persons only;
- recording of all data relative to fuel supply;
- connections to the installed software that analyzes the consumption per vehicle or driver, managing the fuel supplies and indicating the stock.

In particular, every user and/or vehicle has a proximity card that, neared to the appropriate terminals, allows checking if the authorization to proceed exists. Only if the card is valid and the user inserts the correct number of km made by the vehicle, will the terminal automatically activate the fuel pump. At the end of the supply term, the system puts off the fuel pump. Thanks to a screen that displays the operations to be fulfilled in clear messages, the system is very simple to use.

The regular consumption and supply control is guaranteed by the registration of all data relative to: the supplied fuel quantity, supply date and hour, the code of the user that has made the supply, covered kilometers, vehicle code etc.

The system is extremely practical because the memory capacity of the terminal is of 3840 operations. Data can be uploaded in the software once at the end of



Besides the registration of the performed transactions, the terminal automatically recognizes and manages a list of 2.880 authorized cards.

## SOFTWARE

The software solution allows the complete management of the entire system, in particular: **personnel management**. It represents the management of the company employees' personal data, in order to identify the drivers who made the supply.

**vehicle management**. This function manages vehicle data: fueling, maintenance type (Km, hours and liters) and the license number for refueling. Having this information the software automatically updates the number of covered kilometers and used liters. This function

indicates which driver is using a certain vehicle, the expenses and deadlines (stamp, insurance, etc.).

**tank management.** It displays data regarding the quantity of the fuel contained in the tanks and indicates when it reaches the minimum level (it signals the terminal the need to refuel).

**tank fuel supply.** Tank fuel supply management shows the supplied quantity, the cost per liter and the fuel left.

**fuel supply.** It allows inserting data regarding the refueling made outside of the company or to change the existing information.

**fuel supply.** It imports data referring to refueling made and controlled by the terminal for each vehicle, reporting the calculated amount (cost/liter) and the updating of the tank fuel supply, in addition to the total of kilometers or liters for each vehicle.

**fuel cost summary.** It makes the summary of the fuel costs for a certain period, specifying the average number of kilometers per vehicle.

## **HARDWARE**

The hardware system is composed of:

- terminals with customized firmware (v 2.08) for driver and refueling management identification;
- semi-active tag reader for the identification of the vehicles connected to the terminal;



Achieved with the most modern technologies, ZucchettiGroup terminals have a basic and pleasant design with a practical control panel and wide tactile buttons.

The devices are state of the art in control management software, depositing all data afferent to the use of the two managed gas pumps.