

Deliverable 4.1.2 “Infrastructure and Works”



COSMOTE

A better world, for all.



Interreg IPA CBC Programme
“Greece- Republic of North Macedonia 2014-2020”

The views expressed in this publication do not necessarily reflect the views of the European Union, the participating countries and the Managing Authority

Deliverable 4.1.2. Infrastructure and Works

Introduction

The Project aimed at the capability upgrade of the customs station in the Evzonoï area. The main focus was in monitoring traffic, monitoring the customs area and providing enhanced capabilities for the inspection of specific vehicles.

For this reason a modular solution was provided with the ability to:

- ✓ Register the license plates of all vehicles and/or containers passing through customs
- ✓ Inspect the underside of chosen vehicles
- ✓ Enable surveillance in selected customs areas via a cctv system.

The above capabilities significantly increased security aspects, regarding the customs operation and infrastructure.

Deliverable 4.1.2. Infrastructure and Works

Table of contents

Introduction	2
1. Scope.....	4
2. Methodology	4
3. Deliverables	5
4. System Operation.....	5

Deliverable 4.1.2. Infrastructure and Works

1. Scope

The scope of the project was to develop, install and train personnel to operate, a system of several sensor sources (Cameras, Traffic Bars, Led Signs). The core of the system is specialized software with the ability to “recognize” vehicle license plates and container numbers, from photos taken by cameras, convert the image to text and store the text into a database. In addition the software has the ability to compare the license plates with previously stored license plate numbers in order to identify possible matches (black listed, white listed).

The complete system has also the ability to provide surveillance to designated areas, through a cctv integration.

In addition the required software and hardware was provided in order to inspect the underside of vehicles through specialized cameras.

2. Methodology

In order to describe the functionality of the system, a preliminary study was prepared, describing the functionality of each sub system and the functionality able to be achieved by the entire operational system.

The study was delivered for revision by the authority supervising the project, comments were made, that were taken under consideration and a final implementation study was delivered for approval. After the approval, the installation of the required hardware and software commenced. Following the installation works, the parameter programming, took place in order to bring the systems into operational status.

Since the operation of the system is software controlled, a debugging session was planned in order to identify possible system failures.

After the debugging session and the correction of possible malfunction causes, the system was brought into a testing operational status, in order to monitor the system and record its behavior in real operating conditions.

Deliverable 4.1.2. Infrastructure and Works

Corrective actions took place after the system monitoring and the system was delivered for operation. During this time the system operators were trained, and for the initial operation of the system, contractor personnel were on site to assist the operators of the system.

3. Deliverables

The Project Deliverables are described below:

- The as built Study for the entire system and assorted sub systems
- The installation schematics
- Photographic material of installed components
- Cabling Measurement for F/O and Copper
- Rule of origin information for all materials used
- Cabling Infrastructure schematics
- The required informational sign for the project.

4. System Operation

4.1 CCTV

Multiple cameras are installed in specific designated points in order to provide surveillance capabilities for the customs area. The camera feed is displayed in the control room where the operator can monitor the system and the covered areas.

4.2 License Plate and Container Number Recognition

Each vehicle is informed to stop at a designated point through led signs, while a traffic bar blocks the route of the car. When the car stops, the license plate is photographed, the photo and the license number is displayed to the operator. The license number is compared for possible match in the database. If there is no match to the black listed license number the traffic bar will be

Deliverable 4.1.2. Infrastructure and Works

raised automatically or manually and the vehicle will be allowed to pass, while a greeting message is displayed in the led sign. In the case that the vehicle license plate is found to be in the black listed numbers, the operator will be informed and the traffic bar will not allow the vehicle to proceed to exit. The same procedure applies to the container number recognition.

4.3 Under vehicle inspection

The vehicle is informed to stop at a designated point through led signs, while a traffic bar blocks the route of the car. A specialized camera is used to photograph the underside of the vehicle. The photograph is displayed to the operator. If the operator decides to allow the vehicle to proceed he/she can lift the traffic bar allowing the vehicle to exit the customs area.