



# Rennes installs the first Smart Traffic Light!

## Municipality of Rennes, France.

### Mission

Like many other cities the city of Rennes has seen its road traffic increase significantly over the past years. The city uses various technologies to optimize the efficiency of traffic lights at intersections in order to improve the traffic flow and reduce the travel time for all users. So far, the city has mainly deployed magnetic loops buried in the ground to detect the presence of vehicles at the stop bar. This technology has limitations since it is intrusive, expensive to maintain and does not take into account the new soft mobility (bicycles, scooters, etc.). The Citilog video sensors used

so far by the city of Rennes give complete satisfaction both in operation as well as by their ease of installation and maintenance.

Their only "weak point" is that they can be potentially rotated, vandalized or stolen when snagged directly on the traffic light head. Moreover, historic cities are increasingly keen to highlight their architectural heritage and preserve a strong visual identity.

Adding sensors for traffic management can sometimes conflict with these requirements or regulations. The city of Rennes has therefore expressed. Rennes has therefore expressed video-based solutions to make

them more discreet, more aesthetic in order to limit their exposure to vandalism.

### Solution

In order to respond to this request and improve existing concepts, three companies (Aximum, Axis Communications and Citilog) have actively collaborated to develop a traffic light head which incorporates a miniature detection camera within the head itself, almost invisible and optimally positioned to cover the stop bar area. Adding advanced vehicle detection functions for approaching vehicles and 2-wheelers makes this product the very first Smart Traffic Light.

**“The smart light solves the problems of external video sensors that have been frequently vandalized in recent years. We are satisfied with its aesthetics, its discreet camera and the advanced functions of detection that it offers in order to improve mobility in cities. The solution also offers cities a response to the needs of new mobility for better traffic management. ”**

Erwan Michel, Business Development Manager, Citilog

Another advantage of this innovative product is that the camera angle does not need adjustment in the field during installation. It is fully preconfigured: its installation and configuration then becomes way more simple.

Finally, the communication between the Smart Traffic Light and the Traffic Controller can be performed via an Ethernet link with a variety of compatible protocols. The solution therefore does not require additional hardware interface boards, making it more cost effective and reliable.

## Results

Smart Traffic Light is the fruit of several months of integration between the teams from Aximum, Axis Communications and Citilog in order to design a traffic light head capable of embarking in a discreet design a camera and an advanced image processing software.

After extensive laboratory testing aimed at validating performance rates close to 100% day and night and on several channels simultaneously, the first deployment was done on a leg of the intersection used by mixed means of transportation (light vehicles, trucks, buses and bicycles). The installation of the Smart Traffic Light took place no differently than that of a traditional traffic light without

additional constraints. This was achieved thanks to a pre-configuration of the camera in factory. Only the traffic light was changed, limiting the cost of materials, civil engineering and installation. After a simple and fast detection zones configuration through the light graphical user interface on a laptop/tablet, the Smart Traffic Light was able to detect vehicles in a few minutes and signal their presence to the traffic controller.

A better measurement of the demand of incoming traffic flows contributes to a greater mobility efficiency at the intersection.

The result of this collaborative work is a state-of-the-art innovative product, easy to install and setup. It is also a product which will be able to fit into any type of environment, respect the regulations of urban planning and be easily maintained over time.

Finally, it is a flexible solution that allows cities to add a detection function on existing or new traffic lights on a large scale for all cities who wish to bring intelligence into intersection control.

