



APPLICATION STORY



Streamlining Traffic in the City of Kings

The city of Lima, Peru, is taking extensive measures to tackle its problem of heavy traffic congestion and pollution. As part of the solution, Lima city authorities recently called upon Traficon to help them improve urban traffic flows.

Although Lima can boast a rich colonial architecture, and a wealthy historical and cultural past, it is not the typical hotspot for the average foreign traveler and tourist. Unknown and unloved, the city makes foreigners think of urban chaos and traffic congestion. This is undeserved. Whereas, five to ten years ago, Lima might have come across loud and chaotic, the city has now shaped up to become a bustling, more modern and cleaner place to stay.

Traffic congestion

This is not to say that Lima indeed has some serious traffic problems to cope with. Traffic congestion is still a daily nuisance for commuters. For many, navigating around the city can be a truly nerve-racking and time-consuming experience. Local economy also faces the consequences, as productivity is seriously hampered. Last but not least, traffic pollution poses a serious health risk to the city's inhabitants.

City authorities are well aware of the problem, and are taking appropriate measures to free up the city's traffic situation. Investments in public transport include an expansion of the city's rapid bus transport system, the Metropolitan, as well as an expansion of the city's electric train line, the Tren Eléctrico. Both measures are intended to increase mobility of the daily Lima commuter.

Still, this will not be enough. Peruvian incomes are expected to rise within the next few years, which means that more and more people will be able to buy their first car. According to Tráfico Lima, a citizen's group that works to reduce traffic accidents and environmental damage, this trend will also have an impact on Lima's traffic.

Intelligent traffic technology

With this trend in mind, it is clear that Lima's road infrastructure required the appropriate attention. In an effort to

TrafiCam - X-stream



TrafiCam X-stream PC configuration software

further optimize the city's road traffic, Lima authorities installed a new traffic control center in 2011. The centre was built to monitor and optimize traffic along the city's main streets and avenues. In total, the control centre integrates a new traffic light network at 218 road intersections, featuring TrafiCam video detection sensors. Thanks to Traficon's vehicle presence sensors, vehicle density levels can be monitored, determining the peaks and troughs in the day's traffic, which in turn allows the city's control centre to regulate the traffic lights' green waves.





Lima suffers from a congestion problem that city authorities are determined to resolve.



A unique sensor family

TrafiCam and TrafiCam x-stream provide detection and monitoring of moving and stationary vehicles at signalized intersections. Via detection outputs, vehicle presence information is transmitted to the traffic controller so that signal timing can be adjusted dynamically, resulting in reduced waiting time, improved traffic flow and less pollution.

TrafiCam x-stream is even more unique because of its IP-addressability and its on-board compression, thus providing high quality streaming video. This above-ground sensor allows streaming video at full frame rate via Ethernet for both system and traffic monitoring.

So users can configure, view and control the system both on-site and remotely creating the possibility for active intersection management right from their desk. Traficon currently has a worldwide installed base of more than 35,000 TrafiCam and TrafiCam x-stream units.



The integration of the TrafiCam units into the traffic light network was performed by ITS integrator SICE. In total, the company installed some 618 video detection sensors in the main avenues of Lima. Both Traficon's TrafiCam vehicle presence sensor and the TrafiCam x-stream vehicle presence sensor with streaming video were chosen for the project.

Broad functionality

Next to the regulation of traffic lights, Traficon's video sensors are also deployed for access control, calculation of vehicle occupancy and for the calculation of queue lengths. "Due to the extended functionality, the TrafiCam and TrafiCam x-stream sensors proved to be the most advanced technology in the field," SICE representatives say. "The fact that all images

and video captured by the sensors are sent to the control center for visual check by the operators is an invaluable asset."

Challenges

On average, Lima's traffic light network is around 25 years old. A challenge? Not according to SICE representatives: "The link with the TrafiCam sensors was established without any problems. What's more, the Traficon sensors are very easy to install and require very little configuration. Add to this the quick support we got from Traficon and we have a very good candidate for future projects of similar caliber."

Hope for the future

Do not always believe the travel guides. Despite the dreary city image that lives in the minds of many foreign travelers, Lima

is still a place worth visiting. And with the steady efforts of the city authorities for the improvement of public and road transport, the city might still be experiencing smoother and safer traffic in the near future.

"We are confident that Traficon technology will make a difference," SICE comments. "After all, the purpose of the entire project was to reduce traffic accidents, reduce delays, make traffic smoother and the environment cleaner.

It might be too early now to present definite results, but we hope to that city authorities will be able to do that soon."



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