Fits.speed

Fits for Speed Enforcement

Contributing to saving lives and making road transportation safety enforcement smarter.

Fits.speed extends FITS core platform with speed enforcement specific capabilities, enabling automated speed enforcement by connecting all traffic violation sensors, raw data processing and preparation of violation cases.

What problem does it solve?

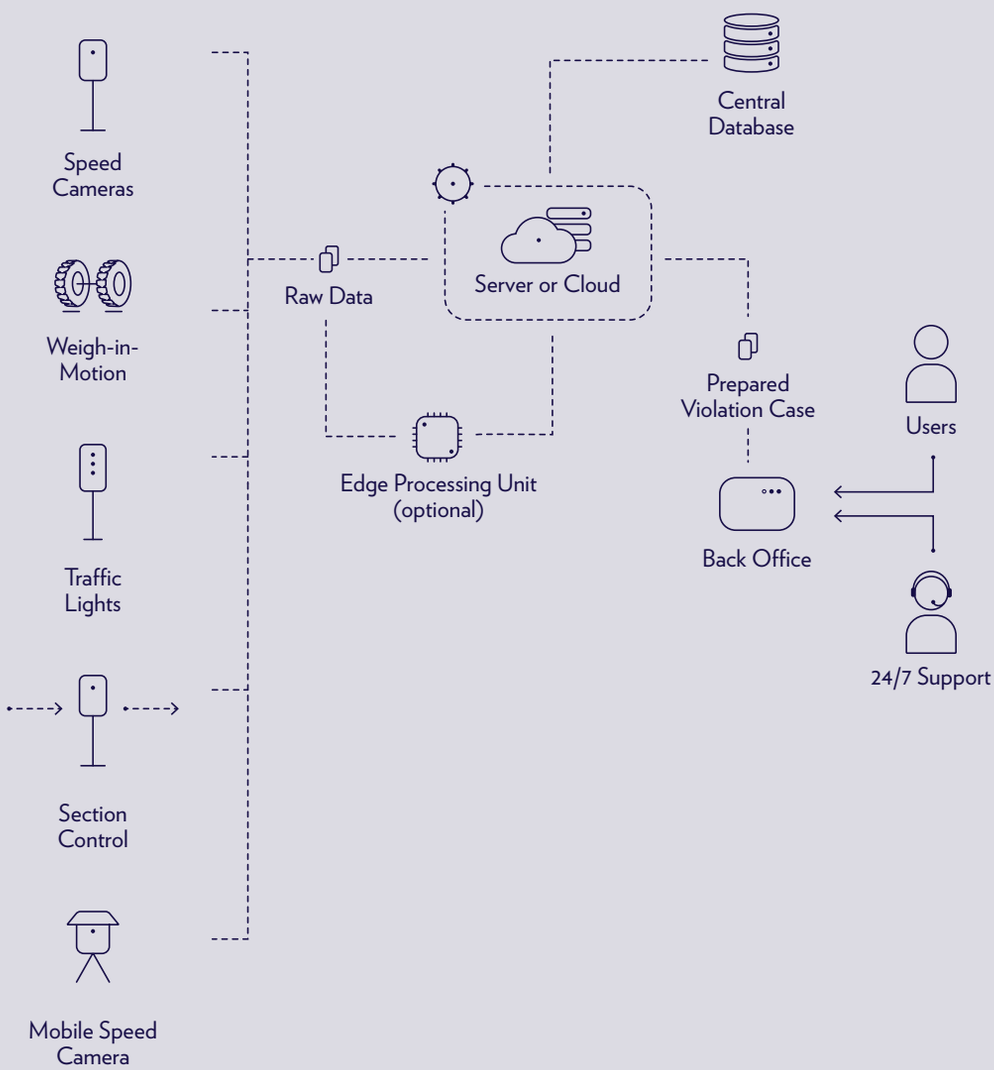
Most countries over the years have procured mobile or stationary speed cameras, however these cameras might come from various manufacturers and with their own standard back-office solutions.

Fits.speed is a vendor-independent software platform thus enabling centralization of speed cameras, no matter what camera vendor is or might be deployed in the future.

Legacy back-office installations have difficulties to meet scalability and availability demands in modern speed enforcement processes, cloud-based system allows quick deployment of speed cameras and enables high availability of the system.

Existing back-office solutions often require high human intervention, especially on occasions when vehicles without visible number plates are captured by cameras (e.g. motorcycles). Fits.speed image/video analytics allows automating such situations without necessity to manually intervene and process individual violation errors.

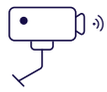
How does the system work?



Key features

Image or video-based automatic violation inspection and processing, through the use of advanced number plate recognition (ANPR) and determination of vehicle types.

Easy to use user interface with a dashboard view of sensors and recent violations.



Support of multiple offence types processing and comprehensive violation search list.

Upload and management of all evidence data mages, video clips, date, time, number plate, location).

Support of spot speed cameras, mobile speed cameras, point-to-point section control cameras, including over low-quality network conditions.

Who would benefit?

Road and Traffic Safety Agencies

Law Enforcement Agencies

National and/ or road police

Key benefits

Maximum precision for license plate and issuing country recognition, highly resistant to weather conditions, view angle etc.

Sensor monitoring enables efficiency in sensor maintenance tasks.

Data collected into a unified store from all speed cameras allows to avoid manual violation process and decrease operational costs.

Micro-targeting for vehicle type and other attributes. Adaptable AI engine can be trained to recognize country and city specific vehicle types with high accuracy (e.g. to recognize public transport vehicles in a specific city, motorcycles, and other).

Automatic, near real-time data collection from speed cameras allows to quickly and efficiently process violations.

Implementing Speed Enforcement | Fits.speed

Client

The Road Traffic Safety Directorate (CSDD) is a public limited company that deals with vehicle registration, drivers' qualification exams, issuing driving licenses, technical insurance, road safety audits and general monitoring, maintaining the public register as well as educating and informing road users.

The Challenge

Due to the limited number of outdated speed detection devices and the increased number of car accidents caused by speeding, the Latvian demography and economy were suffering considerably. The challenge was to create a cost-effective and fast roll-out solution to improve road safety.

The Solution

The solution was to deploy speed cameras - powerful and precise, difficult to damage, equipped with 24/7 monitoring and a re-trained deep neural network for ANPR/MMR (Automatic Number Plate Recognition and Make and Model Recognition), allowing to detect upcoming issues, pre-process speeding violations, enable rapid response, ensure statistical analysis and educate drivers about being safe on the road.

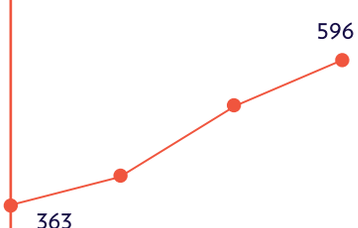
The Outcome

In 2016-2018, the number of traffic accidents has dropped by 47% and serious traffic accidents - by 45%. Moreover, in 2016, 97 257 speeding protocols were processed and penalties for the total of 3.7M EUR were imposed, proving that the funds invested in the solution can be paid off within 1-2 years. But most importantly 0 deaths were recorded due to speeding in these locations where speed cameras have been placed.

CSDD

«Every year 1M people worldwide die due to car accidents. That makes half of the population of Latvia. And if we can change this atrocious statistic by improving the road environment, it's our number one priority! Last year, 3 790 car accidents were recorded in Latvia, but by implementing new technology speed cameras, we were able to significantly decrease these numbers, allowing us to believe that the cameras are doing their job properly.»

2012-2015 **Before Fits.speed**



Speeding Accidents 2012-2015

2016 **Fits.speed deployment**

Speed cameras detect violations, through a proprietary Deep Neural Networks Fits.speed recognizes the vehicle's type and its license plate, and then the pre-processed violation case is sent to a law enforcement agency

0 deaths recorded due to speeding in locations where speed cameras were placed

45% decrease in serious traffic accidents

47% decrease in traffic accidents