



StarTraq case study

North Yorkshire Police Traffic Bureau



How the StarTraq Dome has helped North Yorkshire Police Traffic Bureau (NYPTB) to grow their speed enforcement programme to improve road safety.

Executive Summary

The number of people killed or seriously injured (KSIs) on North Yorkshire roads is unacceptably high. Motorists who speed excessively are a contributory factor to the number of KSIs. In 2010, North Yorkshire Police Traffic Bureau (NYPTB) introduced mobile safety cameras to enforce speed limits. Motorists caught speeding are now receiving education, a fine or an appearance in court; depending on how much they are exceeding the speed limit by.



“Since the implementation of the StarTraq Dome, NYP has been able to process four times the offence volume than before.”

**Dave Brown, Traffic Bureau
Manager, NYPTB**

NYPTB turned to technology company StarTraq to provide a comprehensive back office software solution to process the thousands of offences that are captured on mobile safety cameras. StarTraq’s Dome solution has created processing efficiencies for NYPTB allowing them to process more offences with fewer staff. This has lowered the overall operating cost of the traffic bureau by over £250,000 per annum allowing for more funds to be diverted to road safety initiatives.

The Challenge

In 2010, NYPTB explored the possibility of using safety cameras in reducing casualties in North Yorkshire. A key reason for this was that the number of people killed or seriously injured on North Yorkshire’s roads plateaued at 78 in 2009 and again in 2010.

North Yorkshire is the largest county in England and as such it was not deemed to be financially viable to install fixed safety cameras across the many speeding location hotspots and areas where anti-social behaviour was being witnessed. Mobile safety cameras gave NYPTB the flexibility to enforce at multiple locations across the county. It was especially important that vulnerable road users such as motorcyclists, who represented a significant contribution to the number of KSIs, could also be dealt with appropriately. High-tech safety cameras were used to capture the speed of the vehicle but also other offence types such as not wearing a seatbelt and using a mobile phone whilst driving.

The physical presence of the safety cameras and signage began to encourage most people to stick to the speed limit but it was evident that some drivers were continuing to speed. The outcome for these drivers is determined by how much they are exceeding the speed limit by and they will either be offered driver education, given 3 penalty points on their license with £100 fine or an appearance in court.

The first mobile safety camera started enforcing in June 2011 and it quickly became apparent that processing a traffic offence from ‘camera capture’ to one of these outcomes is complex. Firstly, a stringent set of rules apply in the lifecycle of a traffic offence e.g. the cameras have to be type approved and



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calibrated, Notices of Intended Prosecution (NIPS) have to be issued within 14 days and speeding bands need to be set for each outcome. Secondly, if the offending driver has to go to court an evidence trail needs to be produced to support the case for the prosecution. And finally, it is important to deter errant drivers with camera enforcement but it is equally important that all drivers are treated fairly; the 'Justice Gap' where a significant number of offending motorists just simply get away with it, is clearly unfair.

"The efficiencies achieved through StarTraq's back office enforcement system are enormous and with the majority of offenders taking up a driver education course, NYP's enforcement programme funds itself and enjoys positive public reaction."

Dave Brown, Traffic Bureau Manager, NYPTB

To meet this challenge NYPTB turned to technology provider StarTraq Ltd to help them with their back office processing of traffic offences. Essentially StarTraq provide a sophisticated workflow and document management system that enables the processing of traffic offences from different camera types through to a successful prosecution outcome.

StarTraq's Dome Verification solution

NYPTB purchased their first mobile safety camera for a pilot in 2010; in 18 months it captured more than 26,000 speeding violations. This was the first processing challenge as it quickly became evident that verifying the offences manually was not going to be sustainable because the back office team had to manually fast forward to each offence on the film clip, grab the still image of the offence and validate the evidence.

To meet this challenge NYPTB invested in the Dome back office software from StarTraq to help them to process their speeding offences more efficiently.

The verification module of the Dome has improved NYPTB's offence processing efficiency in a number of crucial areas:

- The stop and grab feature enables the capture of still images from video footage which meant that staff did not need to manually fast-forward through the video evidence captured by the camera
- All offence details are shown on one screen and image enhancement tools help to identify the offender e.g. zoom, cut, colour, brightness and contrast
- Rejection codes can be used so that an outcome for every offence is achieved, whether that is an acceptance or a reason for non-acceptance
- The automatic link to the police national computer means that the vehicle's keeper details could be quickly accessed in order to send a NIP
- Workspaces, tasks, roles and permissions create a flexible environment to share workload between individuals and teams

StarTraq's Dome Docs solution

The next challenge was how to handle the workload and the mountain of documents created when processing the speeding offences. Each offence has an average of 4-5 documents relating to it including the original NIP, the S172 admission, additional nominations, camera calibration certificates, location maps and



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bespoke correspondence. Prior to the introduction of Dome Docs, the NYPTB had to store all of these documents as paper which meant lots of laborious filing and the time consuming retrieval of data. The Dome has allowed NYPTB to realise the paperless office which has reduced the cost of physically storing paper records.

Dome Docs has helped NYPTB to manage its workload and documents in a number of ways:

- It has reduced the amount of manual repetitive tasks
- More offences are now being processed with fewer staff
- Increased accuracy ensures that each offence is dealt with swiftly and fairly
- Customisable graphical workflow means that the software has been configured to the NYPTB's business processes
- Full document management capability to fully realise the paperless office
- More efficient than a paper based system as it can be accessed from various sources and users
- The inbuilt reporting tool allows for flexible reporting from a management perspective
- Custom fields can be created to store any information required by the NYPTB
- A full documentation history is stored and court files can be produced quickly
- Fully auditable seamless process from start to finish

The Dome gives a chronological display of all of the documents relating to an offence and the case history is at our fingertips. This allows us to produce court files in a third of the time.

**Angela Lawson, Traffic Bureau
Team Leader, NYPTB**

The results and growth of the camera enforcement programme

The NYPTB have steadily increased their speed enforcement and the number of violations processed since they introduced the StarTraq Dome in 2013 (Figure 1). In addition, approximately 50% of the offenders took the opportunity to attend a speed awareness course instead of paying a £100 fine. Education is important for changing driver behaviour and it is vital for funding because a proportion of the course fee is allocated to the NYPTB to invest in their road safety programme. The Dome software automatically sends a course offer letter to the offender based on the speed limits defined in the workflow, e.g. speeding between 35 and 42 miles per hour in a 30 zone will result in a course offer.

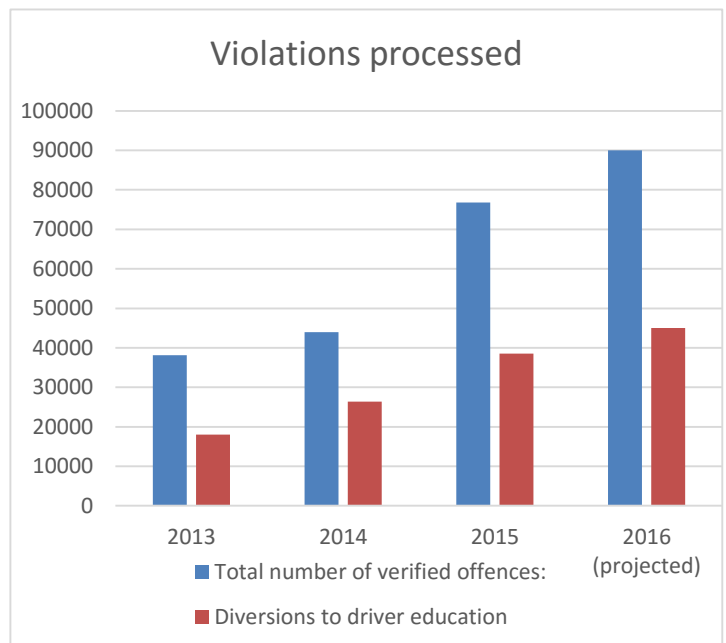


Figure 1



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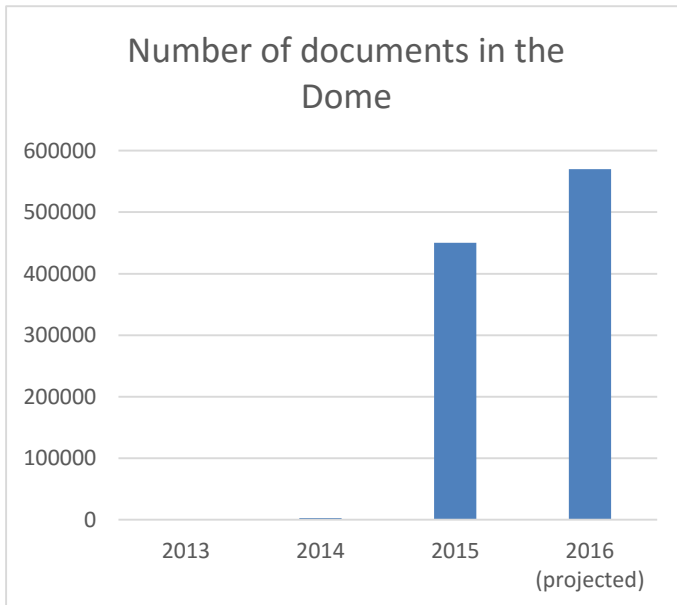


Figure 2

The NYPTB introduced Dome Docs in late 2014. By 2015 over 400,000 documents were stored in the database and this is predicted to be more than 550,000 documents by the end of 2016 (Figure 2). The ability to quickly scan, store and access any correspondence relating to an offence is now key to the smooth operation at the NYPTB.

The processing efficiency of the NYPTB has been improving steadily since they installed the Dome. In 2013, just over 6,000 offences were being processed for every staff member using the Dome to process camera generated offences. By the end of 2016 this is predicted to double to over 12,000 (Figure 3). This reduces the overall costs of the programme resulting in more funding for road safety initiatives. With the installation of StarTraq Dome software it is estimated that NYPTB is now saving over £250,000 per annum in staff and overhead costs.

Due to a power cut and a bank holiday we unable to process any offences for 4 days. This created a backlog which would have normally taken weeks to sort out. With the Dome we were able to verify 1700 documents per day and the backlog disappeared in a matter of days.
Dave Brown, Traffic Bureau Manager, NYPTB

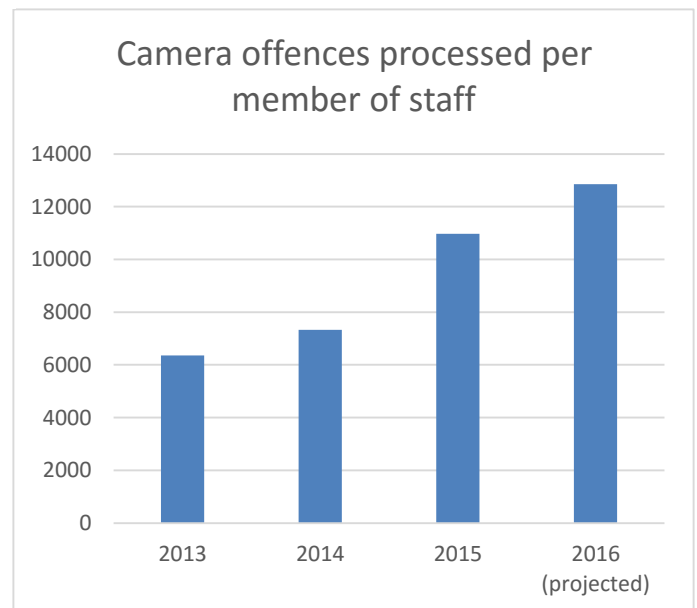


Figure 3



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The overall effect of the camera enforcement programme at the NYPTB has been an improvement in road safety. This is evidenced by the reduction in the number of speed related KSIs recorded on North Yorkshire's roads (Figure 4). In 2013, the total number of KSIs was 79, by the end of 2016 the trend indicates that it will be around 50 KSIs. In terms of fatalities, the story is even better; in 2013 there were 19 speed related fatalities, in 2015 there were just 6 fatalities, if this trend continues there could be less than 3 fatalities in 2016.

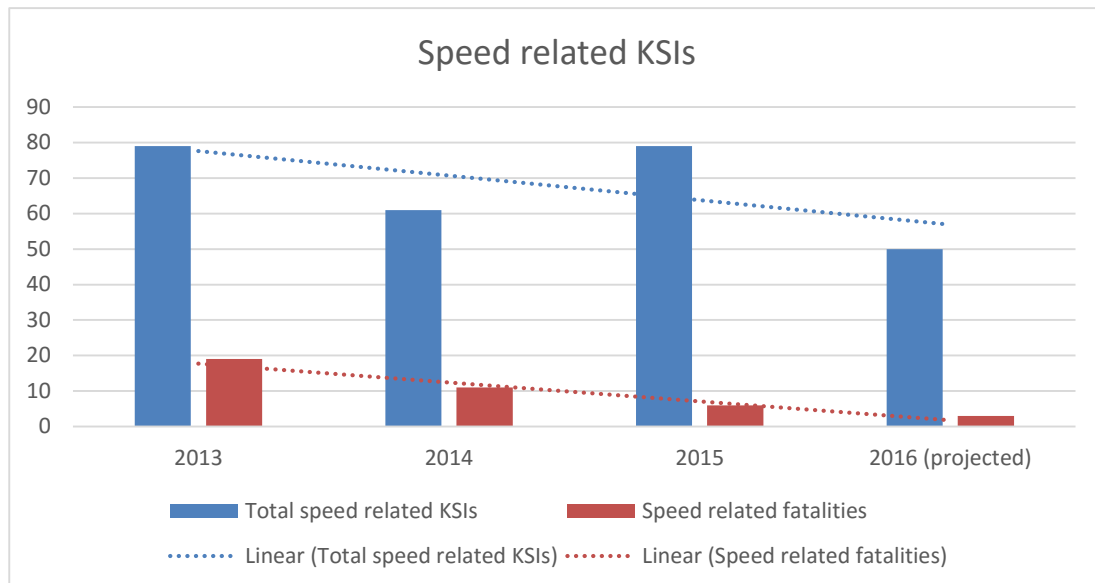


Figure 4

The Future

With the continued success of the camera enforcement programme the NYPTB will be investing in more enforcement camera vehicles to further reduce the number of KSIs. North Yorkshire covers a large geographical area and in order to enforce in all corners of the county there are plans to introduce satellite offices. The StarTraq Dome solution is future proofed to cope with these changes. It is fully scalable to cope with the resulting increase in number of offences being captured and it is web based so only a browser will be required at satellite locations to upload and verify offences remotely.

StarTraq is constantly striving to improve their service by listening to the needs of the NYPTB and developing innovative technologies to increase functionality, improve efficiency and adapt to the ever changing road safety landscape.

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