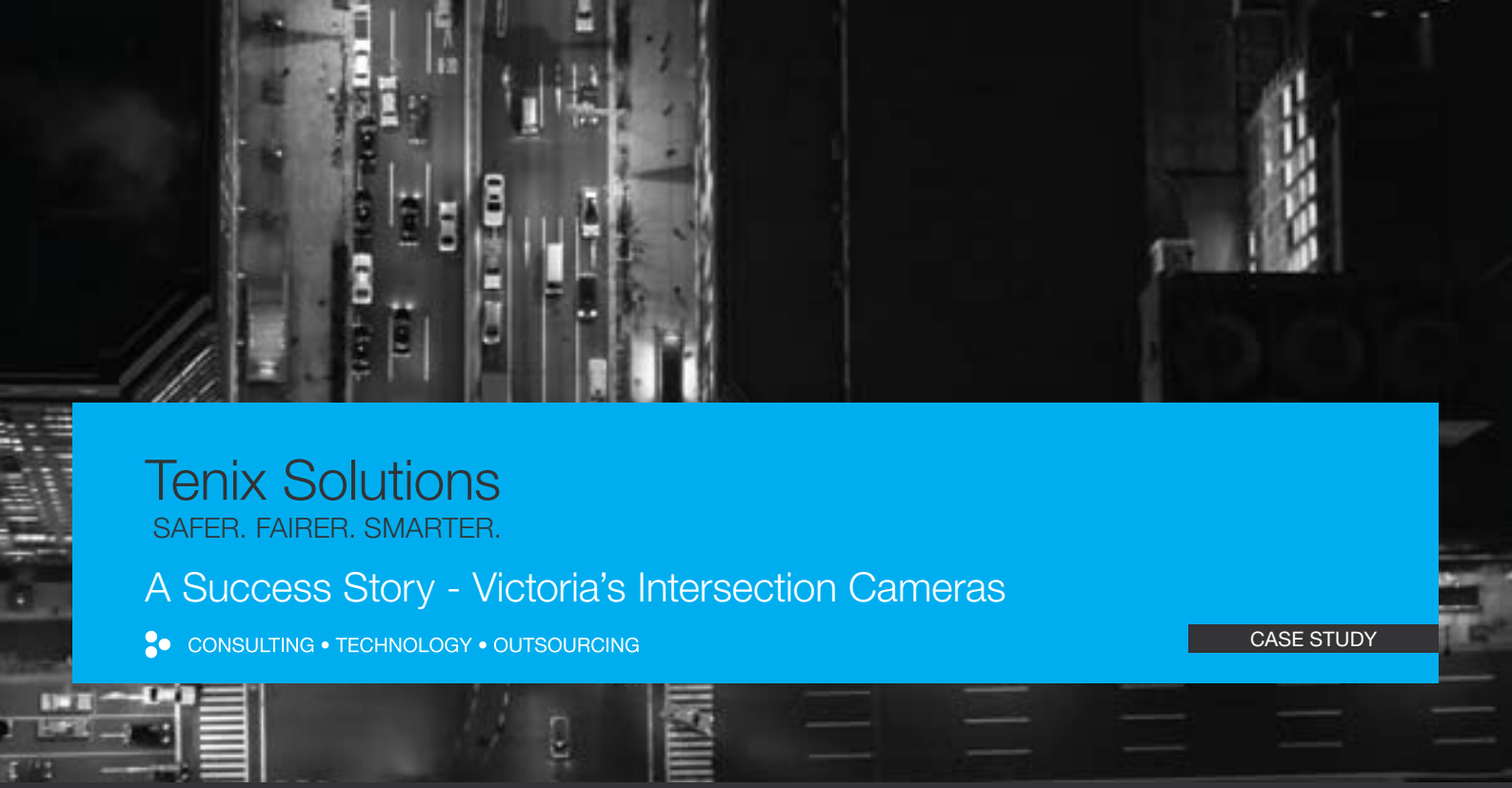

Tenix Solutions

SAFER. FAIRER. SMARTER.

A Success Story - Victoria's Intersection Cameras

CONSULTING • TECHNOLOGY • OUTSOURCING

CASE STUDY

In 2004, the Victorian Department of Justice (DoJ) collaborated with Victoria Police and VicRoads to develop an initiative to reduce the number and severity of crashes at metropolitan intersections.

85 intersections were identified and a program was established to find a solution to reduce the number, the severity and the impact of incidents and crashes at these sites.

DoJ decided the best way to discourage dangerous driving and reduce crashes at these locations was to install integrated speed/red light cameras. These would have the ability to detect red light running and speed infringements, independently and simultaneously.

At the time, a few of the identified intersections were equipped with antiquated analogue red light cameras that lacked the processing power required for the program. No digital fixed cameras had yet been deployed at any traffic intersection in Victoria.

The Digital Solution

The DoJ requested a robust digital solution that provided adequate detection of traffic infringements and had the ability to generate quality evidence. The solution had to be camera agnostic and ensure evidence quality and integrity was of the highest standard, fit for prosecution and most importantly, secure.

Tenix Solutions was approached as the systems partner to assist with the implementation of the 85 new intersection cameras and to develop the evidence and infringement processing system required to support camera evidence from three different vendors.

Identifying the Challenges

Tenix Solutions, an experienced road safety partner to governments, identified the following major challenges:

- Digital cameras of this type had never been installed in Victoria.
- The process of transferring digital evidence from cameras had not been developed before.
- Each camera provided evidential data in different formats. This data would need to be reformatted before loading into the evidence processing system.
- Each camera vendor supplied their own image viewing software to view infringement images. However, this software was unable to view images from the other suppliers.

Desired Outcomes

The DoJ requested a solution that encompassed the following requirements:

- Each camera implemented had to meet strict evidential quality and accuracy requirements to minimise the risk of appeals due to poor quality evidence.
- An automated process to transfer image data quickly, securely and accurately from the different camera types.
- The ability to use this project to streamline the future installation and integration of future camera types.
- Changes to the existing evidence processing system were needed to be made quickly with minimal disruptions to evidence processing and prosecutability targets.

Tenix®

Our Approach

Utilising our in-house project management and software development resources, Tenix Solutions worked closely with the DoJ and camera vendors to develop a multi-faceted solution.

Our approach to the solution comprised the following:

- Development of an automated data retrieval, extraction and loading solution from the selected cameras.
- Development of additional evidence management features in our evidence processing system to verify images from each new camera.
- A site acceptance procedure to ensure each new site was commissioned correctly and evidence captured from the site would meet strict quality and accuracy requirements.

Our Solution

Key features of the solution developed by Tenix Solutions are outlined below:

- Camera data retrievers are able to port the data from each camera to a central archive before transporting it to custom built extractors.
- The extractors convert the proprietary raw data into an open standard for processing.
- From the extractors, evidence enters two streams. First is Tenix Solutions' evidence processing platform, and second is the public information service.
- The dual information processing and display service created a secure environment for the general public to inspect the evidence of the infringement.
- Additional screens, image overlays and verification process manuals were developed to process evidence captured by the new cameras.
- The development of a universal image certification process, independent of camera vendors, called NOVA VCS.
- The development of a site acceptance procedure contained more than 40 quality checks to ensure that each commissioned site met performance standards.

A unique element of the solution was the development and deployment of Tenix Solutions' Secondary Image Speed Verification technology, NOVA SISV.

Solution Deployment

Once the solution was developed, it was put to the test to determine its performance. Each of the 85 sites was rigorously tested to ensure output was of an acceptable standard.

Checks and balances were put in place to ensure that the evidence chain was not comprised starting from the evidence loading process, through to the printing of the infringement notice.

The Result

After consultation, testing, and retesting, all 85 sites were successfully commissioned. All new and existing systems and components proved their performance capability, with detected infringements resulting in 85% of infringements being fit for prosecution.

The process developed by Tenix Solutions is still used in Victoria today.

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