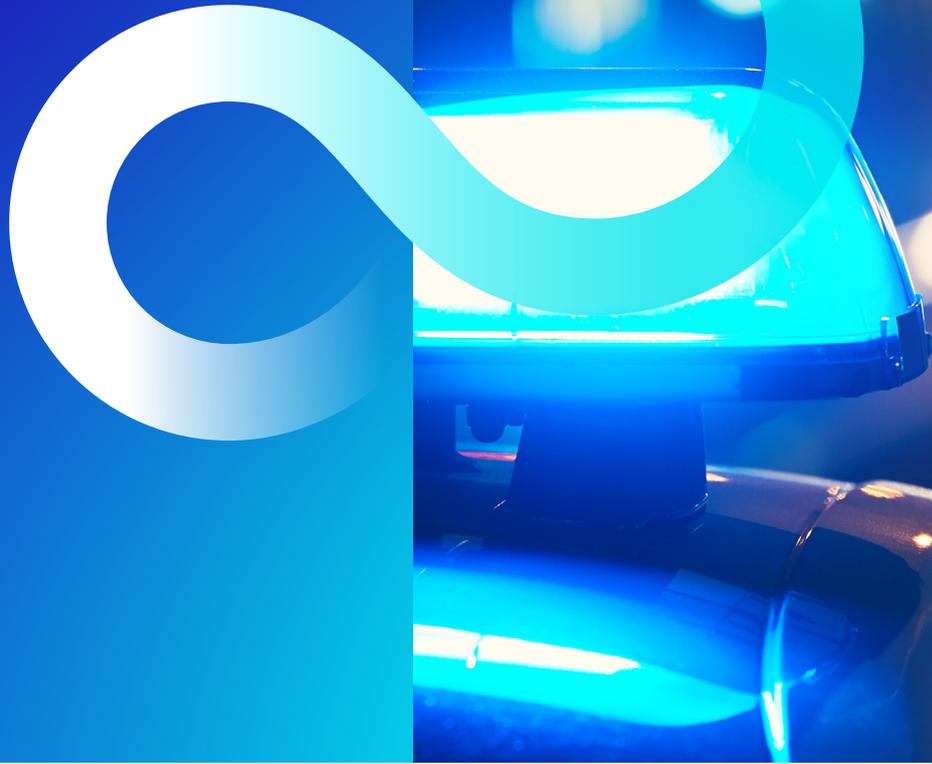




Partners in crime stopping



This Australian police force provides a range of policing services 24 hours a day, seven days a week to keep citizens safe. Thousands of employees work across over 100 police stations.

Behind the scenes, Australian law enforcement agencies use innovative technology to ensure the safety of the public as well as coordinate the force in the most efficient ways. Even frontline officers need access to backend systems when dealing with any crime from firearm to vehicle related. Over 20 years, Fujitsu has been a trusted partner of this Australian police force, delivering several unique solutions to help a trusted society thrive. With public safety a key customer industry, Fujitsu has the experience to increase efficiency of often lifechanging processes. Fujitsu aims to create a resilient society in which people can live in peace and prosperity, and its work with this customer centres around that goal.

Upgrades given the green light Expiation back-office systems integration

At the turn of the century, technology was improving rapidly, but road accidents were unfortunately still commonplace with hundreds to thousands of crash-related injuries and fatalities recorded annually. This police force saw the opportunity to improve their red light and speeding expiation process by partnering with a technology provider who was interested and experienced in improving public safety. The offences were being detected under various scenarios using disparate equipment and technology from multiple vendors and processing them involved using several separate internal and external systems. The customer lacked technology that was responsive to legislative and emerging business needs. Fujitsu was engaged to develop, transform and integrate the back-office systems to be more centralised.

Fujitsu designed bespoke applications and services to integrate the multi-vendor systems with back-office, and the external with internal systems. The solution included a SQL Server back-end repository for incident records, camera management and configuration. Photos and documents would be stored using Micro Focus Content Manager, and a portal was created for the public to access



these photos of their alleged traffic offences and submit review requests. Internal applications were also created for system health checks, configuration, and reporting.

The system has been resilient, meeting evolving business, technology, and modernisation requirements. There has been a massive increase in efficient throughput of incidents, increasing safety on local roads, and a smoother experience was delivered for users – both police and public. Evidence and records are preserved securely and reliably, importantly allowing for more trust in society through transparency to the public. The customer's transition to more modern operations was rapid and painless.

In for a penny, in for an impound

Clamping and Impounding Processing System

Another opportunity arose for Fujitsu to partner with this customer in 2009. Every day, the force processed impounded and clamped vehicles across police stations and impound yards. They dealt with the coming, going and destruction of vehicles in accordance with relevant legislation. However, it was proving difficult to coordinate up-to-date vehicle information across the jurisdiction at the various stages of the impound-release-dispose cycle. Unhelpfully, relevant external services could not easily access impound information and help process long term outstanding impoundments. These issues resulted in difficulty of processing even those vehicles that were impounded correctly and within the regulations of state legislation. The removal of unsafe vehicles from local roads was being severely hindered.

To help free up staff time and smooth the impoundment process, Fujitsu proposed and created the Clamping and Impounding System ("CLIPS") web application with

C# code-behind and a SQL back-end database, secured through Active Directory roles. CLIPS allows authorised users to enter, view, update, and report on vehicles and impoundment yards, while a C# secondary service application performs daily batch processing and status updates. CLIPS also generates statements and notices for court hearings and clients. Ongoing support with a dedication to public safety has been provided by Fujitsu, responsive to legislative and business requirements.

Fujitsu was able to accelerate its impact in the public safety arena with CLIPS, enabling the police force to utilise accurate, real-time information with minimal labour from staff thanks to its new background processes. Reduced cost, time, and effort to retrieve, collate and update information on vehicles, owners and yards allows same-day decision making, quickly releasing more vehicles either back to the owner or into the compounder. With less time spent on system admin, police force employees can dedicate more time to investigations and services which require a human's judgement.

Helping the police with their enquiries

SearchLite frontline technology

At any point in the field, a police officer may require access to back-office information on people, addresses, vehicles, firearms and more. In 2016, the force knew that officers utilising mobile devices should be able to also access information on the go. While large in-car data terminals were being used in police vehicles, this format was not suitable for deployment to small hand-held mobile devices. For safe use in fast paced and even dangerous situations, the mobile UI needed to be intuitive, with efficient navigation to secure information.

Fujitsu worked locally with frontline officers and other stakeholders to workshop use cases, user stories and UI design. They came up with a web-based Java solution: a thin mobile web application accesses an Apache Tomcat hosted web application which manages the UI. The use of Google Web Toolkit and Sencha Touch mean it is also accessible from a desktop browser. With five levels of security, only authorised users can access backend systems and find data related to persons of interest, vehicles, firearms, warrants and more.

In the years since its introduction, the solution, named "SearchLite", has been used effectively by frontline officers, and a follow-on enhancement project built in additional capability including maps, and updates to person, firearm, and vehicle details. The technology has also been refreshed to support Tomcat9 and Windows Server 2019. With SearchLite, officers on the front line can now easily access back-end information via an intuitive mobile interface, speeding up investigations greatly.

The usual suspects

Through their multi-decade relationship, Fujitsu and this customer have tackled several technological challenges together, from road safety- to HR-related. Fujitsu's keen business-wide interest in seeing a safer global society has been both proven and heightened with its innovative solutions for the policing industry. Fujitsu continues to work side by side with this customer as well as more public safety organisations to promote a more trusted society. The services provided have been able to impact not only the frontline police force, but everyday people from pedestrians to data analysts, making life safer and easier for countless Australians.



Chris and the middleman

Chris²¹ Middleware Services

By 2015, Fujitsu and the customer were enjoying a trusting relationship that greatly benefited society with efficient new policing systems for increased safety and security. However, the client's Human Resource Management System (HRMS), although not utilised by field officers, was also due for a major update. The current system was based on technology commissioned in 1992. The HRMS interfaced with several other mainframe and modern applications to include workforce, identity and learning management. It had provided HR management and payroll capability for all staff, plus external users, but was now severely outdated, affecting day-to-day operations. It was decided to transition from the legacy system to Chris²¹ payroll and HR software, but each application would have to be manually reconnected, negatively impacting the migration.

The customer needed existing systems to remain unchanged and uninterrupted, so Fujitsu assisted by introducing interface middleware that would provide the conduit between Chris²¹ and the existing systems. The middleware was implemented across eight independent adapters, each providing input validation, data transformation, and Oracle Service Bus message publishing and consumption. The customer's existing Go-Anywhere Managed File Transfer system was to be used to transfer files to and from adapters. The project utilised DevOps and the GitLab CI/CD pipeline, ensuring efficient deployment.

By introducing Chris²¹ middleware, Fujitsu helped to minimise the impact and scope of the Chris²¹ migration project. The new architecture is scalable, distributed, and adaptable to change, with Fujitsu providing ongoing support and consultancy to keep essential services available to support ongoing policing processes. The system integration avoided tight coupling with separation of concerns mapped to adapters, meaning changes related to one system flow do not impact other systems. The new business application allows users to run batch processing and file extracts over realtime, ensuring the most up to date information is available for HR and payroll management.



Good data, bad data

Leave Mismatch Query Tool

The police force employed over 6,000 workers across a wide variety of skillsets and occupations. There were two HR systems in use, with discrepancies between them. These differences had the potential to cost millions of dollars in incorrectly paid leave. Until Fujitsu's engagement in 2018, identifying mismatches in leave was performed manually, and with so many employees and locations, any information discovery and corrections were difficult to implement.

Fujitsu was able to architect a C# application that identifies and reports incorrect or missing leave data from reports taken from each of the two systems. The tool is deployed using a desktop support application to stations and sites across the police force's jurisdiction. Using the Excel report the Leave Mismatch Query Tool generates, leave can be corrected in the respective HR application.

Years' worth of data has been analysed using the LMQ Tool. The police force continues to use it monthly, reducing an error prone manual task from days of effort to under 10 minutes, and with greater accuracy. Not only does this hugely decrease financial risk, but it also frees up employee time from tedious work. Fujitsu's business application directly addressed the customer's issue, transforming HR operations and automating an otherwise cumbersome and time-consuming task. Although crime never sleeps, members of the police force can now accurately book time off!