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California Law Enforcement Agencies Accelerate Investigations with Advanced Analytics

Across the United States, local governments are modernizing their systems to improve public services, lower costs, and better serve communities. In California, a county of over 700,000 residents and served by over a dozen law enforcement agencies has made technology modernization a top priority.

Agencies in the county faced growing demands for improved coordination, data sharing, and resource optimization. Each year, officers and detectives investigate thousands of cases and spend significant time manually analyzing data across disparate data sources to discover insights. Fragmented systems, data silos, and inconsistent workflows lead to a time-consuming process that can be made more efficient.

To address these challenges, the agencies partnered with C3 AI to deploy C3 Law Enforcement – a solution that offers rapid deployment, intuitive user interface, seamless integration with existing systems, and advanced analytics for data-driven crime investigation.

In the span of 6-months, the C3 AI and Law Enforcement Agency team integrated multiple key data sources – including records management, computer aided dispatch, license plate reader systems, and media evidence – while also training hundreds of users across the county. C3 Law Enforcement streamlined investigations and reduced the time required for aggregate relevant data from multiple days to seconds.

Today, C3 Law Enforcement is the production standard for law enforcement data fusion and analytics, powering smarter policing across multiple agencies. C3 AI is scaling the application by adding additional data sources and providing additional insights. This will enable faster data sharing, enhance cross-jurisdictional collaboration, and equip investigators with a unified view of countywide intelligence.

Project Objectives

- Provide a consolidated, enterprise-level view from multiple disparate investigative data sources

- Integrate case information and apply identity matching algorithms to generate rapid insights

- Develop user interface screens to assist in case investigations, crime trend reporting, and data-driven decision making

- Establish an inter-agency data sharing solution with the County's law enforcement agencies to improve coordination, enhance situational awareness, and support joint investigations across jurisdictions

Results

1.9M
identities consolidated and correlated

1,500
new cases and dispatch records ingested daily

Hundreds
of users accessing C3 Law Enforcement

Multi-day
reduction in time to aggregate data for investigation

Challenges

Prior to adopting C3 Law Enforcement, agencies faced a host of technology challenges in achieving their goal of intelligence-led and analytics-powered law enforcement. These challenges were aggravated by multiple disparate source systems across agencies, a siloed IT solution stack, and diverging reporting standards. Compiling information for an investigation or crime statistic report from each database could take several hours. The manual efforts required to compile this information was a time-consuming process that took time away from the ability to respond to critical events.

Responsible AI

As part of the joint partnership, C3 AI and the County have proactively addressed the responsible use of artificial intelligence in law enforcement. Alongside a county agency, C3 AI presented and showcased the C3 Law Enforcement application directly to residents. These presentations addressed community concerns and helped de-mystify the use of artificial intelligence, while building trust with the public.

About the County

- Served by over a dozen Law Enforcement agencies

- Over 1,000 sworn and civilian personnel across agencies

- Serving over 700,000 residents

"

We will use this on a daily basis... We would normally have to look through multiple databases.

"

Crime Suppression Unit

"

This benefits not only analysts, but bureau chiefs as well...It redefines collaboration and problem solving

"

Crime Analyst

"

Four days of investigation could have been complete in 30 seconds on C3... getting a violent criminal off the street earlier.

"

Vehicle Task Force

"

This is going to be a game-changer for law enforcement.

"

County Sheriff's Office

Approach

During the initial production deployment, a team of C3 AI experts configured the C3 Law Enforcement application alongside subject matter experts from a county law enforcement agency including analysts, records managers, deputies, and lieutenants. These experts provided valuable contributions to the design and testing of the application workflows. Each of the C3 AI team members participated in ride-along patrol shifts, agency briefings, and office visits to better understand the organizational pain-points and opportunities for artificial intelligence to make a positive impact.

C3 AI first ingested and contextualized information across four disparate investigative data sources into a unified image. As part of data unification, the team also configured a database record matching algorithm and applied this algorithm across source systems to streamline the investigation process. The initial aggregated databases were the county Records Management System (RMS), Jail Management System (JMS), Automated License Plate Readers (ALPRs), and media evidence metadata from security and body-worn camera footage.

After deploying the configured application to production, C3 AI expanded the deployment to include data from a neighboring police department. This expansion proved the scalability of C3 Law Enforcement and demonstrated the application's ability to fuse data across multiple agencies. The joint development period between C3 AI and two law enforcement agencies paved the way for a county-wide expansion across sixteen agencies in the County.

The law enforcement agencies in the county unanimously elected to adopt C3 Law Enforcement as the standard for data fusion and analytics. To support the expansion, representatives from each agency formed a cross-functional project management team. Thes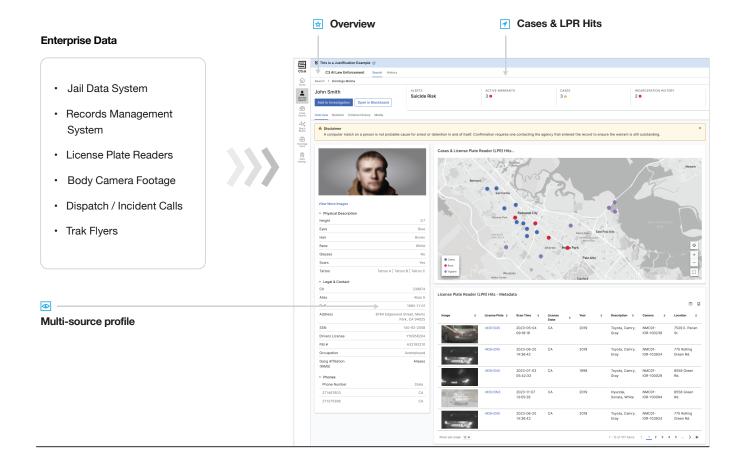e representatives collaborate with C3 AI to steer the deployment roadmap including prioritizing data sources, new feature development, and role-based access controls.

To date, the C3 Law Enforcement application has ten user interface screens tailored to a variety of personas in law enforcement agencies. These screens are extremely intuitive and require only a few minutes of training for new users to accelerate beyond their traditional investigative efficiency.

- **Executive Dashboard** – Displays multi-source, jurisdiction-wide crime events in a geospatial view

- **Analyst Reporting** – Exports custom printer-friendly PDF reports covering trends and statistics

- **Search** – Checks all ingested systems simultaneously to display rapid results for any term or filter

- **Patrol Search** – Provides an optimized user experience for using C3 Law Enforcement inside a patrol vehicle

- **Case Details** – Generates a simple page for viewing narratives, evidence, suspects, and associations

- **Identity Details** – Creates a single-pane-of-glass summary of criminal history, media, and more

- **Investigations** – Bookmarks detail pages, notes, and networks for multi-user collaboration with audit logs

- **Blackboard** – Explores relationships between identities in a network graph with evidence packages

- **Vehicle Details** – Lists vehicle information and associations across identities, cases, and ALPRs

- **Shift Management** – Prepares shift briefings, captures officer knowledge, and sorts warrants

Solution Architecture

C3 AI
Law Enforcement

Enterprise Data

- Jail Data System
- Records Management System
- License Plate Readers
- Body Camera Footage
- Dispatch / Incident Calls
- Trak Flyers

Multi-source profile

Continued Engagement

C3 AI continues to partner with the county agencies to expand the enterprise AI footprint across the County and beyond. The C3 Law Enforcement deployment started with a initial production deployment with a single agency and scaled rapidly across additional law enforcement agencies in the county and in the broader area, driving cross-agency collaboration.

In parallel, the County's Assessor-County Clerk-Recorder & Elections (ACRE) Office also initial production deployment and expanded the deployment of C3 AI Property Appraisal to improve appraisal workflows and accuracy across residential and commercial properties.

Lastly, the county is deploying C3 Generative AI to enable rapid, secure, and accurate access to insights and information stored across disparate sources. With a natural language and interactive chat interface, C3 Generative AI is transforming the human-computer interaction model for state & local government officials.

Proven Results in Initial Production Deployment
Visit C3.ai/get-started