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Case Files: Maricopa County Department of Justice

► INTEGRATION INITIATIVES

Jailhouse Talk

Overcrowded jails, criminals slipping through the cracks, missing case file information—Maricopa County's law enforcement agencies desperately needed to start sharing information.

BY TODD DATZ

ORGANIZATION

Maricopa County Dept. of Justice

PRINCIPAL BUSINESS

County government

HEADQUARTERS

Phoenix

USERS

Approximately 2,000 workers within the criminal justice system; 70,000 "clients," or subjects, arrested every year

URL

www.maricopa.gov

ELVIS NEVER SANG about jailhouse IT, nor has Eminem for that matter, but Larry Bernosky is singing the praises of how technology is helping streamline the criminal justice system in Arizona's Maricopa County. Population in the county, which encompasses the greater Phoenix area, grew by 50 percent during the 1990s.

That growth hasn't slowed down at all—Maricopa is the nation's second fastest-growing county and home to 3.2 million people. As the population has grown, however, so too have the accompanying undesirable elements. The number of arrests and criminal case filings has increased dramatically. The county's eight jails, built to accommodate 5,600 inmates, now house more than 8,000. To help alleviate overcrowding, Maricopa residents passed Proposition 400—the so-called jail tax—in November 1998. Proposition 400 instituted a temporary seven-year sales tax to raise \$900 million to build and operate new jail facilities.

County officials soon realized they needed more than just new jails. The county's criminal justice information systems were in need of a major overhaul. In 1997, Maricopa hired Chinn Planning, a division of RNL Design, an architectural consultancy with offices in Phoenix, to evaluate its criminal justice system in light of its soaring population. The report not only confirmed the need for more jails but also concluded that the county needed to do a better job of automating and integrating its information systems. There were myriad problems—redundant data collection, error-prone manual data entry, ad-hoc interfaces, replicated functions, lack of a unique common case identifier and lots of paper. Data was gathered primarily by telephone, fax and onsite visits. None of that data was shared electronically. The result was unreliable and unavailable information.

To tackle those problems, the county earmarked \$25 million from Proposition 400 to create a cross-departmental group, the Integrated Criminal Justice Information System (ICJIS) agency. Its primary mission was daunting—create a convergent architecture to improve data sharing among the county's five major criminal justice agencies. Following the passage of Proposition 400, those five groups—the sheriff's office, county attorney, superior court, clerk of the court and indigent representation agencies—established an executive

INTEGRATION PROBLEM

To establish a convergent architecture that would enable disparate law enforcement agencies to share information efficiently and effectively.

THE PLAYER

LARRY BERNOSKY

Manager of data integration for the Integrated Criminal Justice Information System agency

CASE ANALYST

CAROLYN PURCELL

CIO of the state of Texas and member of the board of directors for NASCIO

committee that comprises the heads of each of the five groups to determine policy and guide ICJIS's integration efforts. The executive committee established a business team of operational leaders from each group to deal with budgets, policies and other activities to fulfill ICJIS's mission.

ICJIS hired a director, John Doktor, in February 2000. In January 2001, Bernosky joined the agency as manager of data integration and started to assemble his IT staff. He is responsible for making the convergent architecture a reality.

Architectural Agreement

The vision of ICJIS is "to enhance public safety, improve service to the community, and promote quality justice and law enforcement decision-making by sharing information that is timely, secure, reliable and comprehensive." When Bernosky joined ICJIS, he knew achieving those objectives would be fraught with hurdles. Each of the five criminal justice agencies had its own IT department, as well as unique hardware, systems, databases and operating systems. Each agency had built its systems with no overarching view toward building an integrated architecture. "From an IT perspective, they pretty much operated autonomously," says Bernosky.

In addition to the technological challenges, there were political challenges that immediately reared their ugly heads. The agencies squabbled over who should develop the plan. "It was perceived that any county organization—the county CIO, a justice agency, even ICJIS—would have a bias toward some technology or architecture direction that would benefit them and make it difficult for the others," Bernosky says.

To resolve that issue, the agencies decided to bring in an outside broker to referee the process. In early 2001, ICJIS hired Emerald Solutions, an IT consultancy in Portland, Ore., to develop a plan. Later that spring, Emerald delivered its report, which assessed the IT infrastructures of each agency, came up with a set of integration requirements and architecture options, and offered a list of recommendations. That list became the basis for the new architecture upon which ICJIS and the five agencies agreed.

The agency decided on a J2EE development environment with a middleware layer for data and an EAI system called Cloverleaf (purchased from Healthcare.com, which was later bought by Quovadx). ICJIS uses IBM's Websphere for developing Web applications, partly because Bernosky doesn't have many Java engineers on his staff, and he couldn't afford new ones.

To Collect and to Protect

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Executive Summary on Enterprise Application Integration

The nuts, the bolts and the answers.

The 2002 CIO 100 Award Winners for Integration

A host of good examples, including

- [The economics of integrating](#)
- [The ROI of integrating](#)

Putting the Pieces Together

Managing knowledge has been a challenge in the corporate world for decades. Now, once-rival intelligence and police agencies around the globe need to share and analyze information. Fast. (from [Darwinmag.com](#))

CIO Executive Research Center

Data Warehouse Research Center

One of the first major projects Bernosky and his staff began tackling in summer 2001 is called the common case number (CCN) system. Previously, the different agencies assigned multiple numbers to the same criminal cases. The result was confusion for victims, witnesses and attorneys; delays in case processing; and an added layer of complexity to the case flow process. With the CCN system, justice agencies enter information electronically in real-time, which decreases errors and expedites processing.

Before developing the CCN system, ICJIS did extensive mapping of the criminal justice process, which includes investigation, detention, initial appearance, probable cause determination, arraignment, trial and sentencing, just to name a few. Within each of those major processes are numerous other processes. The agency concluded that assigning a common case number to every case would help eliminate confusion, streamline the justice process, reduce errors and facilitate consistent case tracking.

ICJIS first replaced the procedural programming environment based on specific languages with a business rules environment based on processes. This would simplify interaction between the businesspeople and programmers who needed to work together on CCN and other integration projects.

Defining those requirements was anything but straightforward. The five agencies and their five IT departments needed to agree on parameters every step of the way, so there were plenty of disagreements. The two most controversial issues ICJIS dealt with are data ownership and security. The agencies were concerned that the CCN application was compiling a large, centralized data repository that would not be adequately protected or might allow unauthorized access. (For example, closed grand jury information is available only to the clerk of the court.) Bernosky assured the agencies that there wasn't a repository and that any data saved would be used strictly to validate case request numbers.

Executive Summary

Serving one of the fastest growing population centers in the nation has put a strain on the criminal justice infrastructure in Arizona's Maricopa County. Redundant data collection, error-prone manual data entry, ad-hoc interfaces, lack of a unique common identifier and no sharing of information across departments were some of the problems causing the system to buckle under the strain. With a \$25 million appropriation, the county formed a cross-

However, he will continue wrestling with the issue of centralized versus decentralized data. "We'll never have a centralized database, but we must satisfy concerns that data collected will be protected," Bernosky says.

After a year of analysis and six months of development, the CCN successfully launched in January. The key metric is reassurance. When a user such as an attorney or a judge sees case information downstream in the system, he can be assured it's the same case information originally entered into the system. This is a seemingly simple solution, but in IT, the end often doesn't reveal the difficult reality of the means.

Convict TV

departmental group, the Integrated Criminal Justice Information System (ICJIS) agency, to develop convergent architecture that would improve data sharing among the county's five major criminal justice agencies. ICJIS standardized on a J2EE development environment with a middleware layer for data and an EAI system. It also replaced a procedural programming environment based on specific programming languages with a business rules environment based on processes, the better to simplify interaction on integration projects. Case commentator Carolyn Purcell, CIO of the state of Texas, says the data modeling approach and emphasis on governance should serve Maricopa well in its integration efforts.

Countless movies and TV shows have depicted the classic jail visit scene in which a convict is brought to a common area, plopped down in a folding chair and allowed to talk to a loved one through a Plexiglas barrier. In Maricopa County, that scene is radically changing. The county is piloting a video visitation system that obviates the need for face-to-face visits. According to Bernosky, it's the first operational implementation of such a system of its size and capability in the world.

Why switch from Plexiglas to LCD? While not as integral to Maricopa's integration efforts as the common case number project, the video visitation system was developed within the convergent architecture and will improve safety and save time and money by helping jail officials minimize prisoner movement. When the new Fourth Avenue jail opens in early 2004, prisoners will have to move only a short distance from their cells to access the nearest video booth. "That can save thousands of dollars a month," says Bernosky.

The system is currently operational at the Estrella jail in downtown Phoenix. Each setup includes a full-motion video link, using high-resolution cameras and a 17 inch screen at each video station. Estrella hosts about 6,000 visits a month on the new system. Bernosky hopes to eventually expand the system to defense attorneys' offices to allow them more efficient access to their clients.

Life Sentence

Bernosky hopes the county decides to make the ICJIS organization permanent, especially since the programs it's putting in place will require ongoing maintenance. In the meantime, he continues to treat the agencies as valued customers. "We're a facilitator," he says. "We have to feel their pain."

The ICJIS has used about \$6 million of the \$25 million earmarked for its integration efforts so far. It's currently in the first of three phases: integrating the county justice system data, which is scheduled to run through 2005. The second phase will involve building external interfaces to local, state and federal systems. And in the third phase, the ICJIS plans to expand the network infrastructure to allow public access to criminal justice system information. The latter two phases have not yet been budgeted, funded or approved.

As people continue to flock to Maricopa County, attracted by its warm weather and easy access to a round of golf, there's little doubt that police, lawyers and judges will remain busy and more of Maricopa's seedier residents will be doing time. In the meantime,

Expert Analysis

The county's emphasis on data modeling demonstrates its seriousness and bodes well for its success...

Tips from the Integration Trenches

As the manager of data

integration for Maricopa County's Integrated Criminal Justice Information System agency, Larry Bernosky offers some advice for moderating massive integration projects

Bernosky and the rest of the ICJIS team will continue weaving systems together to ensure the people working in the criminal justice agencies can get their information more reliably and efficiently. [CIO](#)

[Read More](#)

1. Treat each organization as a valued customer. "You need to have a common process and architecture so the big guys don't dominate the little guys," he says.

2. Be patient. Allow time for vetting.

3. Make detailed and continuous plans. Ensure schedules are in place, interfaces are detailed, documents are current and testing is comprehensive so that agencies have a continuous view of what is happening and what is expected of them.

4. Stay in touch. Give briefings and reviews so that people don't wander away and lose interest.

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