The Miami-Dade Police Department does more than protect the safety of Florida’s largest county, whose 2.5 million citizens also make it the seventh largest in the United States. Its officers also recognize the crucial role they play everyday in providing a safe and inviting climate for the millions of tourists that come from around the world to enjoy the county’s natural beauty, warm climate and stunning beaches. With tourists spending nearly US$20 billion every year and generating nearly a third of Florida’s sales taxes, it’s hard to overstate the importance of tourism to the region’s economy. So while few of the county’s police officers would likely list economic development in their job description, nearly all grasp the vital link between safe streets and the region’s tourist-driven prosperity.

That connection is paramount for Lieutenant Arnold Palmer, currently supervising the Robbery Investigations Section (RIS), and a former supervisor of the department’s Robbery Intervention Detail (RID). This specialized team of detectives is focused on intensely policing the county’s robbery hotspots and worst repeat offenders. He and the team occupy modest offices on the second-floor of a modern-looking concrete building, set back from a palm-lined street on the western edge of Miami. In his 10 years in the unit, out of 23 in total on the force, Palmer has seen a lot of changes. It’s not just in policing practices, like the way his team used to mark street crime hot spots with colored push pins on a map.

Leadership Spotlight

Lieutenant Arnold Palmer is a member of a specialized robbery unit of the Miami-Dade Police Department. He’s looking for known crime patterns to help his detectives solve cold cases and catch repeat offenders.

How Miami-Dade Police got smarter

What the Miami-Dade Police Department is doing with advanced analytics to close the toughest robbery cases is one facet of a broader Smarter Cities strategy followed by Florida’s largest county. The department recognized that reducing street crime is key not only to its citizens’ quality of life, but also to the vitality of an essential economic driver – tourism. By using advanced models to analyze cold robbery cases against its historical crime data, Palmer’s robbery unit is uncovering insights that are key to solving these cold cases. And as the successes mount, the unit’s detectives are embracing a new crime-fighting tool as a way to give them a second chance on what used to be dead-end cases.

Let’s Build a Smarter Planet
Policing with less

Palmer and the team have also seen the impact of a growing population, shifting demographics and a changing economy on the streets they patrol. Like any good police force, they’ve continually adapted their methods and practices to meet a policing challenge that has grown in scope and complexity. But like nearly all branches of the county’s government, intensifying budget pressures have placed the department in a squeeze between rising demands and shrinking resources.

Palmer, who sees detectives as front-line fighters against a rising tide of street crime and the looming prospect of ever-tightening resources, put it this way: “Our basic challenge was how to cut street crime even as tighter resources have reduced the number of cops on the street.” Over the years, the team had been open to trying new tools, the most notable of which was a program called “analysis-driven enforcement” that used crime history data as the basis for positioning teams of detectives. “We’ve evolved a lot since then in our ability to predict where robberies are likely to occur, both through the use of analysis and our own collective experience.”

The benefits of the Miami-Dade Police Department’s “Blue PALMS” solution

- Achieved a 73 percent “hit rate” in identifying suspects when the model was tested on 40 solved cases
- Significant reductions expected in the number of cold cases
- Safer streets for Miami-Dade citizens and tourists with faster arrests and reduction in repeat crimes

New thinking on cold cases

The more confounding challenge for Palmer and his team of investigators, one shared with the police of all major urban areas, is in closing the hardest cases, where leads, witnesses, video – any facts or evidence that can help solve a case – are lacking. It’s not surprising, explains Palmer, since “the standard practices we used to generate leads, like talking to informants or to the community or to patrol officers, haven’t changed much, if at all,” says Palmer. “That kind of an approach works OK, but it relies a lot on the experience our detectives carry in their head. When the detectives retire or move on, that experience goes with them.”

Palmer’s conundrum was that turnover, due to the retirement of many of his most experienced detectives, was on an upward trend. True, he saw the infusion of young blood as an inherently good thing, especially given their greater comfort with the new types of information – from emails, social media and traffic cameras, to name a few – that his team had access to. But as Palmer recounts, the problem came when the handful of new detectives coming into the unit turned to look for guidance from the senior officers “and it’s just not there. We knew at that point we needed a different way to fill the experience gap going forward.”

His ad hoc efforts to come up with a solution led to blue-sky speculation. What if new detectives on the squad could pose the same questions to a computer database as they would to a veteran detective? That speculation planted a seed in Palmer’s mind that wouldn’t go away.
From conversation to innovation

Fast forward a few months later to early 2011. Unbeknownst to Palmer, members of the department’s Information Technology Services Bureau (ITSB) staff were meeting with IBM specialists on the floor below to discuss developments in predictive police work, like how to use analytics to find hotspots where crime is likely to occur. As the discussion went along, the IT bureau, with whom Palmer had developed a good working relationship, thought it would be a good idea to form a collaborative effort. So after a quick phone call, the group reconvened upstairs and Palmer’s robbery team was there to listen.

Palmer and the robbery team were impressed by the analytical capabilities they heard about. But it wasn’t the predicting of hotspots that grabbed their attention, for an intimate knowledge of the county’s robbery hotspots was already core to their job. Speaking up, Palmer was polite but blunt. “I don’t need you to tell me that there’s going to be a robbery on an afternoon shift in a particular neighborhood. I know it’s going to happen,” he said. “I’d much rather you help me narrow down who did it.”

For cultural and other reasons, Palmer knew – and his superiors agreed – that moving the idea of lead analytics forward would require a bridge between IT and the cops who would use it. “It was just as important to be able to articulate [to IT] what kind of analytical tool would be helpful in breaking cold cases as it was to explain to our detectives why they should take advantage of it.”

– Lieutenant Arnold Palmer, Robbery Investigations Section, Miami-Dade Police Department

Over the next several months, the teams worked together to move from a loosely defined concept to a working prototype. Their back-and-forth efforts focused on defining the right information and, perhaps more importantly, coming up with the right filters and models to produce reliable, credible results. At the outset, says Palmer, the outcome of the effort was far from inevitable. “We didn’t just put forward this refined idea and say ‘build it,’” Palmer explains. “It was a debate – a conversation – a collaboration – and from that conversation we gradually came to the workable idea.”

Lessons learned...

Don’t let the talk get ahead of the walk

Though older cops may be notoriously set in their ways, they can be swayed to adopt new approaches – but pacing is everything.

“What’s worked best for us is proving [the value of Blue PALMS] one case at a time, and stressing that it’s a tool, that it’s a complement to their skills and experience, not a substitute for them.”

– Lieutenant Arnold Palmer
The big picture starts small

What was taking shape within the robbery unit demonstrated how big ideas can come from small places. But more importantly, it showed that for these ideas to reach fruition, the “right” conditions need to be in alignment at the right time. On a leadership level, that means a driving figure in the organization who knows what it takes to nurture top-down support as well as crucial bottom-up buy-in from the ranks, while at the same time keeping the department’s IT personnel on the same page. That person was Palmer. At the organizational level, the robbery unit served as a particularly good launching point for lead modeling because of the prevalence of repeat offenders among perpetrators. Ultimately, the department’s ability to unleash the broader transformative potential of lead modeling would hinge in large part on the team’s ability to deliver results on a smaller scale.

Success brings credibility

Having been appointed the official liaison between IT and the robbery unit, Palmer set out to strengthen the case for the lead-modeling tool—now officially called Blue PALMS, for Predictive Analytics Lead Modeling Software—by building up a series of successes. His constituency was not only the department brass, but also the detectives whose support would be critical to its successful adoption as a robbery-solving tool. In his attempts to introduce Blue PALMS, resistance was predictably stronger among veteran detectives, who saw no reason to give up their long-standing practices. Palmer knew that dictates or coercion wouldn’t win their hearts and minds. He would need to build a beachhead of credibility.

Palmer found that opportunity in one of his best and most experienced detectives. Early in a robbery investigation, the detective indicated to Palmer that he had a strong hunch who the perpetrator was and wanted, in essence, to test the Blue PALMS system. So at the detective’s request, the department analyst fed key details of the crime into the system, including the modus operandi, or MO. The system’s statistical models compared these details to a database of historical data, looking for important correlations and similarities in the crime’s signature. The report that came out of the process included a list of 20 suspects ranked in order of match strength, or likelihood. When the analyst handed the detective the report, his “hunch” suspect was listed in the top five. Soon after his arrest, he confessed, and Palmer had gained a solid convert.

Though it was a useful exercise, Palmer realized that the true test wasn’t in confirming hunches but in breaking cases that had come to a dead end. Such was the situation in a carjacking that had, in Palmer’s words, “no witnesses, no video and no crime scene—nothing to go on.” When the senior detective on the stalled case went on leave after three months, the junior detective to whom it was assigned requested a Blue PALMS report. Shown photographs of the top people on the suspect list, the victim made a positive identification of the suspect leading to the successful conclusion of the case. That suspect was number one on the list.
Just the facts

The success that Blue PALMS continues to build has been a major factor in Palmer’s success in getting his detectives on board. But if there’s a part of his message that resonates even more with his detectives, it’s the fact that Blue PALMS is designed not to change the basics of policing practices, but to enhance them by giving them a second chance of cracking the case. “Police work is at the core about human relations – about talking to witnesses, to victims, to the community – and we’re not out to change that,” says Palmer. “Our aim is to give investigators factual insights from information we already have that might make a difference, so even if we’re successful five percent of the time, we’re going to take a lot of offenders off the street.”

The growing list of cold cases solved has helped Palmer in his efforts to reinforce the merits of Blue PALMS. But, in showing where his loyalty lies, he sees the detectives who’ve closed these cold cases – not the program – as most deserving of the spotlight, and that approach has gone over well. At his chief’s request, Palmer is beginning to use his liaison role as a platform for reaching out to other areas in the Miami-Dade Police Department.

Safer streets for a smarter city

When he speaks of the impact of tourism, a thread that runs through Miami-Dade’s Smarter Cities vision, Palmer sees Blue PALMS as an important tool to protect one of the county’s greatest assets. “The threat to tourism posed by rising street crime was a big reason the unit was established,” says Palmer. “The fact that we’re able to use analytics and intelligence to help us close more cases and keep more criminals off the street is good news for our citizens and our tourist industry.”

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