

Fact Sheet

Miami-Dade County and IBM Technology Projects

Smarter Water Management: Parks, Recreation and Open Spaces

Miami-Dade County's sprawling parks system – the third largest in the United States – includes 263 parks spanning 12,845 acres of land including Zoo Miami, beaches, marinas, pools, golf courses, educational nature centers and preserves.

In the past, Miami-Dade County's parks system's aging water infrastructure had to be manually inspected to detect leaks or other problems. Rising water costs and the labor-intensive process of acquiring, integrating and analyzing historical water consumption data also taxed parks department resources. With more than \$4 million in annual water and sewer costs, a consumption of more than 360 million gallons of water and more than 300 water accounts to manage in 2009-2010, the county decided to focus on big data and analytics – information that drives results.

Now, IBM's Intelligent Operations Center (IOC) for Smarter Cities will allow Miami-Dade County employees to remotely monitor water consumption, detect leaks and share information with colleagues at other parks and facilities. The platform will include a web portal to easily view water consumption data to enable better monitoring and management of overall water usage and more rapidly detect leaks or potential leaks. Smart irrigation technology will automatically optimize irrigation on parks properties where water use is highest – landscaping and golf courses, for example -- and maximize savings.

The parks department estimates a 20% reduction in water use annually with a savings of some \$860,000 per year.

Public Transportation

The same system that is helping to manage the county's parks infrastructure will also be used to link information from the Parks department with the county's existing traffic sensor system to the 311 phone service and "HopMiami" web site to provide smart-phone applications for real-time updates of public transportation schedules and anticipated delays.

A pilot program underway in the Brickell community will provide residents easy access to transportation alternatives and help better manage traffic flow in and out of the area to drive economic development, and improve access during special events.

Sun-Life Stadium

[Sun Life Stadium](#), home of the Miami Dolphins, uses the same intelligent dashboard to effectively manage visitor traffic, monitor weather conditions, and tailor concessions, merchandise and dining services to fans at each event.

Real-time analysis also enables staff to predict consumer preferences and plan concession and merchandise needs for current or future events. Advanced crowd control management with geospatial intelligence and audiovisual notifications, supports security personnel to immediately shift the flow of fans to minimize crowding. New mobile applications for fans provide access to the latest game scores and stats, and provides mobile alerts about the game or an event, including travel and parking instructions, information about the football teams or entertainers and targeted promotions for a concert.

Miami-Dade Police Department

In the [Miami-Dade Police Department](#) (MDPD), access to advanced analytics technology helps officers fight crime and ensure public safety. As one of the first law enforcement agencies in the nation to use an advanced crime data warehouse, MDPD has expanded its use of IBM technology to help officers and investigators make better decisions faster with a new ability to look for links among disparate crimes or situations and provide officers with a more complete

view of a given situation. The system can link directly into park systems and other department operations for cross-agency collaboration and lead generation.

Using IBM SPSS predictive analytics, MDPD can bring together data in new ways to identify unique relationships and spot new and unknown patterns that have significant operational value for officers. The system can use information such as property stolen, time of day, weapon used, and victim details to model what kind of suspect typically commits a particular crime and then generate and filter a suspect list to help solve cases faster. This type of analysis can also be used to help predict, anticipate and prevent future events.

The IBM i2 Intelligent Law Enforcement solution builds on the MDPD's existing technology investments and will provide MDPD with a holistic view across policing and justice partner agencies – removing barriers to information sharing and enabling agencies to focus solely on their mission of predicting, preventing and defeating criminals. It works by bringing together disparate data sets and allowing the entire department access to data they need, using officer's time more effectively when they are looking for information. It will also incorporate MDPD's existing use of predictive analytics for suspect lead detection

Consolidating Technology and Improving Transparency

Consolidating systems such as finance, human resources, budgeting, planning and all transactional areas of the county on a secure, private cloud is providing additional savings. An IBM System Z server provides the efficiency and capacity to meet growing computing demands.

Advanced cloud computing and big data analysis allows citizens to view a wide range of key metrics about the county's performance. Citizens can log into the county's website and track performance in areas such as energy efficiency and service levels for the police and fire departments. They can also use the system to call up every check the county has written in the last decade for insight into where their tax money is going.

The county's HR Warehouse system enables reporting on the county's succession planning, budgeting and hiring trends functions; The county's PowerITDown initiative reports statistics on energy conservation in public buildings.

Miami-Dade County is using the IBM Intelligent Operations Center for Smarter Cities, SPSS predictive analytics, IBM Cognos Business Intelligence software, I2 software and Linux environment on its IBM System z mainframe platform and IBM PureFlex System.

With more than 2.5 million residents, Miami-Dade County is the most populous county in the southeastern United States and the seventh largest in the nation by population. Miami-Dade County operates under a Strong Mayor, who is responsible for the leadership and management of an organization with over 25,000 employees and an annual budget of nearly \$6 billion, form of government; and the 13-member Board of County Commissioners is the legislative body.

For more information on IBM Smarter Cities, please visit www.ibm.com/smartercities.

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