

## EL SALVADOR



### 2014 Statistics

- » **Life expectancy: 74.2 years**
- » **Population: 6.1 million (July 2014 est.)**
- » **GDP per capita: US\$7,500 (2013 est.)**
- » **Mobile penetration: 148.3% (est.)**

Sources: CIA World Factbook (<https://www.cia.gov/library/publications/the-world-factbook>); Internet and mobile penetration from the International Telecommunications Union.

## Seguridad Inalámbrica (Wireless Security) – Strengthening Crime Mapping through Telecommunications Technology in El Salvador

Seguridad Inalámbrica uses mobile and web-based applications to enable law enforcement and municipal government personnel to increase public safety. The system allows participants in several municipalities to collect, map and analyze real-time crime data. The success of the project supports its potential to be implemented in other cities in El Salvador and in other countries in the region.

### Challenge

- » Murders in El Salvador spiked again to a new high in May 2014.<sup>1</sup>
- » In 2013, homicide statistics show that El Salvador had 2,492 murders with the per capita murder rate at 43.3 homicides per 100,000 inhabitants. San Salvador, the capital of El Salvador was rated the 27th most violent city in the world with 44 homicides per 100,000 inhabitants.<sup>2</sup>
- » National and municipal police in El Salvador are struggling to make the most effective use of the resources they have to prevent and reduce violence.
- » Current best-practice policing models reflect problem-oriented, community-oriented, intelligence-led, and security and counter-terrorism policing approaches.<sup>3,4</sup>
- » These models focus on proactive policing and cross-agency communication, with increased use of crime data to drive social policy.<sup>5</sup>
- » The adoption of data-driven practices emphasizes the need for high-quality data to be readily available for analytic and operational use. Lacking such data, municipalities are hampered in modernizing their policing policies.

### Solution

- » Law enforcement officers were issued Qualcomm-enabled Android™ smartphones with an easy-to-use software application for reporting crimes. Officers used the smartphone application, built-in camera, Global Positioning System (GPS) capability and other features to create detailed reports on incidents of crime. Once a report was complete, the officer could immediately send it from the 3G smartphone to an Internet crime database.
- » Authorized officers at each municipality monitored incoming reports via an easy-to-use, secure website; they classified and verified the data as it came in, and could add reports to the system through a web-based form. The website enabled officers to quickly and easily monitor and analyze the geographic distribution of incidents over time or export the data to other systems.
- » Once the information was transmitted into the database, officials from a municipal violence prevention observatory in each municipality could access the data in real-time for analysis. The system displayed incidents on detailed maps, and also interfaced with dedicated geographic information systems to assist in identifying high-risk locations and tracking changes in crime patterns over time. This allowed for analysis of program effectiveness as law enforcement agencies' crime and violence prevention measures were introduced.
- » The handset and website applications were designed with a simple user interface to minimize training requirements. RTI International (RTI), used a "Training-of Trainers" model so that instruction and technical support in participating municipalities could be provided locally. This promoted local ownership of the system, strengthened the technical and leadership skills of law enforcement personnel, and enhanced inter-municipal cooperation and support.
- » In addition to planning the expanded use of the system to additional municipalities, project stakeholders worked together to increase integration between national and municipal crime reporting systems to improve efficiency and the quality of data available to municipal crime observatories for analysis and reporting.

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## Technology

- » Smartphones using Qualcomm® Snapdragon™ processors, a product of Qualcomm Technologies, Inc.
- » Tigo's 3G HSDPA network
- » A client application that runs on Android
- » Free and open source software to reduce system costs

## Impact

- » The Corps of Metropolitan Agents (CAM), the National Civilian Police (PNC), and observatories in six municipalities have access to mobile and web-based crime mapping and reporting databases.
- » More than 11,000 total reports have been submitted using the system. Of the reports submitted, 97 percent have been reviewed and approved by website monitors in each municipality.
- » 588 law enforcement agents have been trained in the use of the Seguridad Inalámbrica crime reporting and mapping system.
- » Incident information reported by law enforcement agents is available immediately to the municipal observatories on an interactive platform. Prior to the project implementation, data were sent on a monthly basis to the observatories by either the PNC or CAM.
- » In 2014, an evaluation of the system showed that municipalities were using the data to adjust deployment of law enforcement resources and improve crime prevention programs. For example, San Salvador increased combined municipal and national police patrols in hot spots based on locations and times identified by the data.
- » The Seguridad Inalámbrica system was developed with free and open source software making it an attainable solution for crime reporting and mapping. Affordable costs encourage local sustainability and scalability.

## Project Stakeholders

- » The National Civilian Police, the Corps of Metropolitan Agents, and the municipal crime and violence prevention observatories of several municipalities participated in testing, training and rolling out the system.
- » The Planning Office for the San Salvador Metropolitan Area (OPAMSS)/Council of San Salvador's Metropolitan Area Mayors (COAMSS), coordinated the institutional relationships and information sharing among stakeholders.
- » Qualcomm Wireless Reach was the primary project funder and provided project management and oversight.
- » RTI International supported system design and development, training, implementation, management, and monitoring and evaluation.
- » Tigo provided smartphones and 3G data services for a one-year period, along with technical assistance.
- » The United States Agency for International Development (USAID) Community-Based Crime and Violence Prevention Project (CVPP) strengthened crime prevention efforts, supported municipal violence prevention observatories, and provided logistical support and coordination.



<sup>1</sup> REUTERS, (2014) "MURDERS IN EL SALVADOR SPIKE TO RECORD HIGH FOR MAY" <http://www.reuters.com/article/2014/05/27/us-elsalvador-violence-idUSBREA4Q00120140527>

<sup>2</sup> UNITED STATES DEPARTMENT OF STATE, OVERSEAS SECURITY ADVISORY COUNCIL (OSAC), BUREAU OF DIPLOMATIC SECURITY, 3 JUNE 2014. "EL SALVADOR 2014 CRIME AND SAFETY REPORT"

<sup>3</sup> CSIS. (2012). "POLICE REFORM IN LATIN AMERICA: IMPLICATIONS FOR U.S. POLICY" CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES, WASHINGTON, DC.

<sup>4</sup> OLIVER, W.M. (2006). "THE FOURTH ERA OF POLICING: HOMELAND SECURITY" INTERNATIONAL REVIEW OF LAW, COMPUTERS, & TECHNOLOGY, 20(1&2), pp. 49–62.

<sup>5</sup> KLOFAS, J., HIPPLE, N.K., MCGARRELL, E. (2010). "THE NEW CRIMINAL JUSTICE: AMERICAN COMMUNITIES AND THE CHANGING WORLD OF CRIME CONTROL." ROUTLEDGE: NEW YORK, NY.

## Qualcomm® Wireless Reach™

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