

# DHS Science and Technology Directorate Operations Analysis—Family Residential Center Study

## **FRCs Needed Operational Improvement**

Immigration and Customs Enforcement (ICE) Enforcement and Removal Operations (ERO) oversees Family Residential Centers (FRCs) where illegal alien family units are detained after being apprehended. ICE/ERO requires FRC operations to be as efficient and effective as possible to better enforce U.S. immigration laws and ensure security of the U.S. homeland, while reducing taxpayer costs.

## **Site Visit Enhances Understanding and Documents Current Processes**

DHS Science and Technology Directorate (S&T) Capability Development Support (CDS) Operations and Requirements Analysis (ORA) team traveled to South Texas to gain firsthand knowledge of FRC processes and operations. While there, ORA analysts learned about family unit apprehensions and family unit intake processing, and toured an FRC. The visit gave ORA analysts a deeper understanding of the apprehension and detention processes for illegal immigrant family units.

ORA used knowledge gained from the South Texas site visit to develop user-validated process flow maps depicting family unit operations. This visual representation of the FRC process flow is being used for training purposes and to identify possible areas for future process improvements.

## **Statistical Analyses Provide Added Insight**

ICE provided ORA years of historical reports describing the daily status of the FRCs. ORA developed a Java-based script to electronically parse these daily reports in a format that enabled ORA to quickly perform statistical analyses and gain a quantitative understanding of FRC operations. Results showed the composition of the apprehended family units did not align with the configuration of the FRC, a prime source of the issues experienced at the FRC.

## **Computer Simulation Optimizes Centers**

The site visit and statistical analyses informed ORA's development of a computer simulation to optimize FRCs and perform predictive modeling. The simulation examines FRC rooms, with a specified number of beds per room, to determine how families can be placed together consistent with age and gender placement restrictions.

The simulation randomly generates family sizes and children's ages and gender in accordance with actual data. It

also can explore hypothetical scenarios by altering FRC family placement restrictions and bed configurations. The simulation reports the number of families denied entry and the number of unused beds for each simulation trial.

ORA originally developed the code for the MATLAB and Octave numerical computation packages, but ICE/ERO ported it to R, a statistical package, for use within ICE. ORA analysts helped ensure the ICE/ERO transfer to R produced the same results as the original version. ICE/ERO is using the model to improve FRC operations and explore alternative physical configurations and the effect of various family housing laws and regulations.



*A view of the exterior of the 2,400-bed FRC at Dilley, Texas.*

## **Focused Study Leads to Clear Answers**

ICE/ERO process analysis focused this year-long assessment on alien family unit intake at the Dilley, Texas FRC, where detained family units await the outcome of immigration hearings or return to their home countries. ICE/ERO operates smaller FRCs elsewhere in the United States. ICE predicts that the simulation could save tens of millions of dollars in future FRC procurements while optimizing occupancy so more family units can be housed.

## **Partners**

- Immigration and Customs Enforcement/Enforcement and Removal Operations (ICE/ERO)
- United States Border Patrol (USBP)



**Homeland  
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