

FOTAS Durango Prison Security Project

Background

Durango Prison, officially known as "Centro de Reinserción Social No. 1 Victoria de Durango," is a correctional facility located in the state of Durango, Mexico. It is one of the largest prisons in the country and has occasionally operated beyond its capacity. Due to past incidents of violence and corruption, there have been significant efforts in recent years to improve security conditions.

Project Scope

The installation of a perimeter security detection system both inside and outside Durango Prison was a high-priority task. A critical security area known as the "dead-man zone" required strict control, ensuring that no human activity took place in this region. Snipers stationed in guard towers responded to verified alerts from the fiber optic detection system, making it essential to maintain a false alarm rate below 5%.

Challenges Faced

A fiber optic Distributed Acoustic Sensing (DAS) system installed by another company failed to pass acceptance tests due to excessively high false and nuisance alarm rates. This was attributed to the system's reliance on rule-based algorithms, which struggled to differentiate between real threats and environmental noise.

FOTAS Solution

FOTAS employs deep learning algorithms instead of rule-based approaches. These advanced algorithms can analyze vast amounts of data and identify patterns that traditional systems might miss. The system quickly learned to distinguish between security threats and non-threatening activities, such as water pumps, reducing unnecessary alarms and improving operational efficiency.

Additionally, the lack of timely technical support from the previous system provider was a significant issue. FOTAS addressed this by providing comprehensive assistance throughout installation, commissioning, and operation phases, ensuring smooth implementation and reliable performance.

Outcome

The existing system was replaced with FOTAS, significantly improving security at Durango Prison. The enhanced system met the required performance levels, and discussions are underway to implement FOTAS in six additional prisons across Mexico.

