Corrections
GIS Solutions for Community Protection and Facility Intelligence

Chart Key
- Crime Rate by Datazone
- Rate Per 1000 Population
- Low - High

CallBlock Status
- Occupied
- Vacant
Applying GIS Technology to Corrections
The Geographic Advantage° for Security and Safety

Every incident or crime is related to a location. The location can be inside or outside prison walls. From tracking the concentration of gangs in a community to following the travel routes of probationers or sex offenders in a neighborhood, you need to know where problems are occurring or emerging.

Geographic information system (GIS) technology can help you leverage information to observe, understand, and respond to the problems you face in the corrections community.

Any criminal data containing an address, such as an offender’s residence, work location, or re-arrest location, can be displayed and analyzed using GIS. External data, such as school locations, “hot” drug markets, and public transportation routes, can also be incorporated into a GIS for further analysis and understanding.

GIS aids the corrections mission by

- Identifying and highlighting areas prone to inmate violence in institutional settings
- Assigning probation and parole officers by location for more efficient routing
- Enhancing inmate monitoring capabilities to capture and build intelligence about criminal activity
- Providing the public with information about offenders that live in close proximity
- Supporting real-time monitoring capabilities for high-risk offenders
- Making site selection decisions for new facilities within a community

ArcGIS® can assist corrections personnel to more effectively manage facility capacity.
Whether inside maximum or minimum security prisons or jails, crime and threats do not disappear behind bars. GIS supports your need to provide a safe and secure environment by delivering a platform for:

- Understanding events and dynamics in a facility including potential security issues
- Identifying potentially high-risk, violent inmates or hazardous locations in a facility
- Analyzing inmate assault patterns or trends by assault locations
- Mitigating gang activity including both recruitment and gang-on-gang violence
- Monitoring inmate interactions with the outside world to flag involvement in criminal activity

GIS can generate a map or model of a facility. Once a layout is established, data such as inmate demographics, gang affiliations, assault locations, and attempted escapes can be incorporated and analyzed. The models and analysis can be used to effectively make safety and security decisions.

Many criminal organizations, particularly gangs, are run from inside prisons. Telephone calls are the most common way to conduct criminal business, but calls are either rarely or randomly monitored. These phone calls contain vital intelligence for correctional facilities and for outside law enforcement personnel. Using a GIS, phone calls can be monitored in near real time, then located via a reverse telephone call analysis. GIS tools allow you to discover patterns and collect intelligence that might otherwise be missed.
The Geographic Advantage for Corrections

Geographic information provides an intuitive and comprehensive view of data for all aspects of corrections. From managing convicted offenders in the community to containing gang violence inside a facility, a geographic information framework gives you an advantage and enables more informed decisions.

Case Management
Using GIS, you can create a map of where offenders live and assign cases equitably based on the convicted offender’s address, the needed level of supervision, or both. This can prevent a probation or parole officer from conducting unneeded travel.

Resource Allocation and Planning
GIS helps you understand community needs and where resources should be allocated. New corrections reporting centers can be sited in areas that reach the most offenders or where the offenders are most at risk for recidivism.

Sex Offender Monitoring
GIS enables you to effectively plan and respond to the unique challenges of monitoring convicted sex offenders. GIS provides the capability to establish a buffer zone for a park or school that an offender may not enter. At the same time, you can use a GIS to display all the day-care centers, parks, or schools that are within 1,000 feet of where a sex offender lives or wants to live. GIS can also be used to send Amber Alert notifications in response to a reported child abduction by not only locating the scene on a map but also determining how far the suspect could have traveled since the crime as well as the possible route of travel.

GIS benefits corrections by providing
- Integration with existing information systems and technology
- Improvement in collaboration and communication across command, control, and response teams
- Increase in the ability to analyze and respond to events as they unfold by using a single, common view of operations
- Improvement in situational awareness for parole, probation, and corrections officers

ArcGIS is used to determine the risk level of sex offender activity in Riverside County, California.

Determining Sex Offenders per Capita for the State of California Using ArcGIS
GIS and Community Corrections

Working to Ensure Effective Supervision and Monitoring

GIS provides an information-based method supporting all roles and aspects of law enforcement.

Probation or Parole Officer
As a probation or parole officer, you can access a GIS to clarify optimal routing, check case information, and determine the potential risk of the next offender.

Commissioners and CIOs
Commissioners and CIOs can use GIS to understand the agency’s effectiveness in monitoring and supervision, to make critical decisions when rearrest rates spike, and to collaborate with other law enforcement agencies.

Corrections GIS Analyst
A corrections GIS analyst can use sophisticated tools to support command staff with operational decisions and short-term tactical and long-term strategic issues.

“Planning and accountability increase with the application of GIS to corrections, parole, and probation. GIS helps illustrate our strengths and identify our weaknesses and allows us to measure and understand how we are doing both individually and as an organization.”

Alphonzo Albright
CIO, New York City Probation
ArcGIS: The Complete Enterprise GIS

Whether you need to perform spatial analysis, manage large amounts of spatial data, or produce cartographically appealing maps to aid in decision making, ArcGIS® allows you to use one common platform to meet all your GIS needs. And because ArcGIS is built using technology standards, it will integrate well with your existing systems.

ArcGIS is a complete system for authoring, serving, and using geographic information. It is an integrated collection of GIS software products for building and deploying a complete GIS wherever it is needed—on desktops or servers, in custom applications, over the Web, or in the field.

Learn more about GIS for corrections at www.esri.com/publicsafety.