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Implementing a GPS Tracking Program for Community-based Supervision: What You Need to Know

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Part I: Background

Correctional agencies are seeking electronic monitoring (EM) programs to combat jail and prison overcrowding, high incarceration costs, and exhausted budgets. As reform efforts continue to shift individuals from incarceration to the community, agencies are drawn to EM solutions including Global Positioning System (GPS) technology. Before your agency decides to implement a GPS tracking program, there are a number of factors to consider. This white paper discusses those factors and key considerations on how to implement a GPS program and what to look for in an EM provider.

Part II: GPS Tracking—Why, Who, & What to Consider

There are a variety of reasons agencies decide to incorporate GPS technology into their community-based supervision programs including legislative reform, court mandates, previous experience with EM, and familiarity with GPS technology.

Additional reasons that influence agencies include:
- Lower cost than incarceration
- Crime deterrence
- Objective proof of adherence to schedules, curfews, and geographic boundaries
- Client accountability and possible behavior modification
- Ability to use graduated sanctions (more and/or fewer monitoring restrictions)
- Evidence in court of conditions of release compliance

In addition, community corrections agencies are being asked to supervise a wider range of individuals who pose more risk in pretrial services and probation and parole programs. As the use of GPS becomes more widespread, the reasons driving agencies to incorporate the technology continue to expand. Whatever the circumstances, there are some basic, agency-level factors to review and evaluate before program implementation.

Program & Policy Design
Determine program goals and design policies and procedures so your agency can achieve its goals.

- Consider which phase of the criminal justice system the program will serve (pretrial, post-conviction, probation, or parole).
- Create policies and procedures that dictate how GPS data, including violation alerts, will be handled. By establishing and adhering to clearly defined GPS tracking policies, you can minimize agency risk and liability.
- Identify a system to evaluate program outcomes to determine if the goals and objectives were achieved.

Budget & Funding
Program funding is often a primary consideration.

- Identify a funding plan to justify the program spend.
- Determine a budget and funding sources which may include assistance from federal, state, or local governments and grant money.
- Many agencies defray part or all of the cost of the program by implementing a client self-pay component.

Risk & Liability
There is an inherent risk and liability that comes with community corrections supervision, and the use of GPS is no exception. Agencies should consider several areas relative to risk and liability.

- Determine staff protocol in response to alerts and violations, and ensure there is an agency-wide understanding of protocol.
- Monitor and clarify community misperceptions, and clearly outline the realities and limitations of GPS tracking.
- Consider a risk/needs assessment or screening tool to help identify appropriate individuals for the program.

Operations & Staffing

Adding a GPS tracking program may change the operations and structure of your agency.

- Determine what, if any, aspects of the program will be outsourced and how your agency might rely on the provider. If most program elements are outsourced, operational changes may not be necessary.
- The degree to which your agency contracts with an outside provider may affect staffing needs, changes in caseload, training requirements, and the population of individuals served.

Inventory Management

Determine how you will handle equipment inventory, both while it is in use and on the shelf.

- Determine how many individuals will be supervised with GPS equipment, the number of additional units to keep in reserve, where excess inventory will be stored, and how equipment will be maintained.
- Decide how to handle lost, damaged, or stolen equipment. Will clients be expected to pay for lost or damaged equipment?
- Consider one-piece GPS tracking devices to reduce inventory issues.

Client Risk

Unless required by legislation or mandate, many agencies rely on evidence-based risk/needs assessments to determine whether GPS tracking is an appropriate supervision tool. Generally, agencies use GPS devices to supervise high-risk individuals in real-time.

- GPS tracking software enables officers to log client curfew and exclusion zone information.
- Exclusion zones depend on the individual and may include schools, playgrounds, and parks.
- If the client enters one of these restricted areas, an alert is sent to the supervising officer.

Geography

The region in which your agency is located, whether urban or rural, may impact the type of GPS system that is most suitable. Geography along with quality and consistency of cellular coverage are important dynamics to a successful GPS tracking program. Consider physical features that may interfere with GPS and cellular signals and strength (e.g., urban canyons, mountains, valleys).

There are four types of technologies used to deliver location information including:

1. **Assisted GPS Location Technology:** Utilized when the device is in range of a cellular tower and communicating with GPS satellites, GPS data is collected and reported in near real-time. GPS is typically sampled every minute. The sample rate should increase the number of times per minute when a client is violating an exclusion zone.

   - Inquire about a provider's ability to acquire GPS signals from other Global Navigation Satellite Systems (GNSS). While the United States-based GPS system is the most prevalent, other nations are fielding or have fielded, their own system to provide complementary, independent positioning, navigation, and timing capability. This ability increases the number of available satellites, improving GPS reception and accuracy.

2. **Autonomous GPS Location Technology:** Utilized when the device is not in range of a cellular tower, yet it is communicating with GPS satellites, the GPS data is collected and retained in the device's memory, and downloaded once cellular service is restored.

3. **Wi-Fi Location Technology:** Utilized when the device is not communicating with GPS satellites, a Wi-Fi location is attempted after a loss of GPS for five minutes. If Wi-Fi is available, it will continue to sample every five minutes until a GPS location becomes available.

4. **Cellular Tower Location Technology:** Cellular location is attempted after a loss of both GPS and Wi-Fi for 30 minutes. The cellular tower transmits a unique identifier and signal strength that are submitted to Google's database for location. If cellular location is available, it will continue to sample every 30 minutes until a GPS or Wi-Fi signal becomes available.

NOTE: Consider devices with an optional beacon. If the device is in range of the client's assigned beacon, location attempts utilizing the above technologies will not occur.

Part lll: Choose a GPS Provider

Working with a trusted and knowledgeable provider is important. Some provider-related factors to consider are outlined below.

Cost

Cost is always an important variable. If your agency is dealing with a fixed budget or limited funding, there are several considerations.

- Match costs against the flexibility of the system. Can it integrate with other EM technologies and provide configurable settings?
- Balance cost against the level of support provided by the chosen provider.
- Consider performing an overall cost benefit analysis, rather than simply comparing per-unit pricing among providers.

Provider Support & Service

It is important that the provider offer support and services along with quality products. Agencies rely on the provider on numerous fronts including technical troubleshooting, training, equipment ordering, and monitoring services.

- Ensure providers are able to quickly understand and resolve issues that arise.
- Determine if service and support hours are sufficient to meet your agency's needs. For example, will it be necessary to reach the provider 24/7/365?

Training

Equipment training is another key consideration when choosing a provider. The level of comfort your officers have working with a GPS tracking system can affect program efficiency and effectiveness.

- Look for GPS equipment and software that is easy to use and providers that offer quality product training.
- Examine how training is delivered (e.g., in-person, virtual, etc.), and determine if it will meet the needs of agency staff.

Equipment Features

Once program components are outlined, consider the desired equipment features. The goal is to utilize reliable technology that meets your agency's programmatic goals.

- Research equipment durability to ensure it will withstand normal wear and tear.
  o GPS units should be waterproof, shock-resistant, and include a tamper-resistant strap that secures around the client's ankle or wrist.
- A long battery life and field-replaceable battery are advantageous in terms of reliability and inventory management.
  o Some manufacturers require servicing for battery replacement, while other batteries can be changed in the field.
- Identify if the GPS system enables officer/client communication.
  o Some systems provide texting, pre-recorded voice messages, and incoming call capabilities.

Software

The provider's software platform capabilities should be carefully considered. Agencies use EM software to measure, monitor, and analyze massive amounts of data, create and manage client profiles, handle violation alerts, and map GPS data.

- The platform should be cloud-based, secure, intuitive, and easy to use.
- Evaluate if the software provides advanced analytics to calculate potential risk to identify and address issues.
- Determine whether the software is available on a desktop and through a mobile application. Mobile app capabilities can increase officer productivity and efficiency in the field.
- Request a software demonstration to learn about the platform, as well as how data is managed and reported.

Equipment Compatibility

Agencies often choose to employ other technologies outside of GPS tracking including radio frequency (RF), mobile monitoring, and alcohol detection. EM providers with a full continuum of products and services offer an advantage in terms of cost and inventory management.

Future-ready Technology

As technology continues to progress, cellular networks need to support more data at faster speeds. Agencies should consider providers who manufacture future-ready products to reduce cost, increase device longevity, and provide reliable supervision.

Part IV: Conclusion

Advancements in technology have changed the way agencies monitor individuals on community supervision. GPS systems have become more sophisticated and provide officers with details on client activity. When investigating, implementing, and operating a GPS tracking program, there are many factors to consider. While each agency has its own specific needs and objectives for implementation, finding the right provider to partner with is critical to a successful EM program.

About BI Incorporated

For more than 40 years, BI Incorporated has delivered innovative products and services that offer an alternative to incarceration for community corrections agencies supervising parolees, probationers, or pretrial defendants. Our products include a complete continuum of electronic monitoring technologies, case management software, and services for reliable community supervision. Electronic monitoring is a reliable, safe, and cost-effective way to monitor individuals as they live and work in the community.