

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

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Part I: Background

Legislative mandates and policy reforms have accelerated the integration of electronic monitoring (EM) programs into community supervision frameworks. These technologies offer agencies enhanced oversight capabilities, enabling real-time monitoring that supports compliance while reducing reliance on incarceration. Before your agency decides to implement a GPS tracking program, there are several factors to consider. This white paper outlines essential considerations and best practices for agencies looking to implement or refine a location tracking program, with an emphasis on what to look for in an EM provider.

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

Location tracking enables agencies to monitor individuals in real time and adjust supervision based on behavior and risk. Research shows that the number of people under electronic monitoring in the U.S. grew nearly fivefold between 2005 and 2021, with more than 250,000 adults on some form of EM in 2021. The main drivers include:

- Lower cost compared to incarceration
- Crime deterrence
- Objective proof of compliance with curfews, schedules, and geographical boundaries
- Client accountability and possible behavior modification
- Ability to document conditions of release compliance for courts, probation, or parole boards
- Ability to use graduated sanctions (more and/or fewer monitoring restrictions)

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 location tracking technologies 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

Clear policies aligned with your agency's goals improve supervision accuracy and build trust with courts and the community. Thoughtful program design improves resource use and strengthens your ability to demonstrate compliance effectively.

When designing a location tracking program:

- Define clear goals. Is the goal to reduce jail populations, increase compliance, or support reentry?
- Consider which phase of the criminal justice system the program will serve (pretrial, post-conviction, probation, parole, or specialized groups).
- Create policies and procedures that dictate how tracking data, such as alert violations will be handled. By establishing and adhering to clearly defined policies, you can minimize agency risk and liability.
- Regularly assess program outcomes using available data.
- Ensure policies are in place to protect privacy, prevent misuse of data, and comply with state and federal regulations—including adherence to FedRAMP security controls and National Institute of Standards and Technology (NIST) SP 800-53 guidelines for access control, data protection, and continuous monitoring.

Budget & Funding

To build and maintain a location tracking program that supports compliance and recidivism reduction, agencies need to plan carefully. Key steps include:

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

Risk & Liability

While monitoring technologies aid supervision, agencies remain responsible for managing risks and ensuring it's used appropriately. To support this, consider:

- Determine staff protocol in response to alerts and violations and thoroughly train staff on protocols.
- Ensure the public and supervised individuals understand what GPS tracking can and cannot do.
- Consider a risk/needs assessment or screening tool to help identify appropriate individuals for the program.
- Regularly review cases to ensure that GPS is used appropriately and not over-applied.

Operations & Staffing

Implementing location tracking can open opportunities to review and adjust agency roles and workloads. Consider these actions to support effective program management:

- Assess staff needs to effectively monitor alerts, maintain equipment, and manage administrative duties.

- Determine what, if any, aspects of the program will be outsourced, like equipment maintenance or after-hours alert monitoring.
- Provide ongoing training to keep staff confident and up to date as technology evolves.

Inventory Management

Keeping close track of equipment helps prevent supervision gaps and keeps the program running smoothly. Consider these steps to maintain inventory and reduce disruptions:

- Determine how many individuals will be supervised with tracking equipment, the number of additional units to keep in reserve, where excess inventory will be stored, and how equipment will be maintained.
- Establish clear policies for handling lost, stolen, or damaged equipment.
- Use one-piece, tamper-resistant devices to minimize loss and simplify maintenance.

Client Risk

While the National Conference of State Legislatures (NCSL) has noted a trend toward using electronic monitoring for higher-risk individuals, some states and localities apply it to a broader group, adjusting conditions based on assessed risk. Recent advances in technology have expanded the availability and flexibility of location tracking devices, so agencies now have options designed for varying risk levels. GPS and other location-based monitoring can be tailored, not just for high-risk clients but also for lower-risk individuals when appropriate. Consider the following:

- Use validated assessment tools to determine who is appropriate for each level and type of location tracking.
- Set exclusion zones and curfews based on individual needs and court requirements.
- Monitor for both compliance and opportunities to reduce supervision appropriately as client risk changes.

Geography

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

To ensure accurate and reliable location tracking, a range of technologies are used, each with its own strengths and specific use cases. The main types include:

1. Global Navigation Satellite Systems (GNSS)

Technology: Inquire about a provider's ability to utilize other satellite systems. While the United States-based GPS system is the most prevalent, other nations maintain their own satellite constellations to provide complementary, independent positioning, navigation, and timing capability. This ability increases the number of available satellites, improving GPS reception and accuracy.

2. 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.

3. 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.

4. 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.

5. Cellular 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 III: Choosing a Provider

A reliable EM provider supports your agency's needs today and evolves alongside you tomorrow regardless of your agency size. The following sections explore critical areas, including cost, support, training, equipment features, software capabilities, compatibility, and future readiness—that influence how well a provider can meet your program's demands.

Cost

Investing wisely in electronic monitoring technology can enhance program flexibility, improve support, and deliver strong value for your agency. Considering costs alongside these factors helps ensure your budget supports both current needs and future growth.

- 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.

Support & Service

Behind every effective monitoring system is a provider that understands the unique challenges agencies face and steps in quickly to resolve them. Reliable support and tailored services help keep your program running smoothly, even when unexpected issues arise.

- Ensure providers can quickly understand and resolve issues that arise.
- Ask about the provider's experience with similar agencies and the level of customization available.
- 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

Confidence with equipment and software directly influences how well your team can manage supervision. Providers that deliver thorough, accessible training empower staff to use the system effectively, boosting overall program success.

- Look for equipment and software that is easy to use and providers that offer quality product training.
- Require comprehensive training for all staff who will use the system.
- Training should cover equipment operation, data analysis, privacy, and emergency protocols.

Equipment Features

The right equipment can make a big difference in both client privacy and program reliability. Focusing on durability, battery life, communication options, and discreet design helps ensure that the technology supports your agency's goals without adding unnecessary challenges.

- Research equipment durability to ensure it will withstand normal wear and tear.
 - o Units should be waterproof, shock-resistant, and include a tamper-resistant strap that is secure 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 tracking system enables officer/client communication.
 - o Some systems provide text messaging, pre-recorded voice messages, and incoming call capabilities.
- There is a growing trend in electronic monitoring toward smaller, lighter, and more discreet devices.
- Compliance with the National Institute of Justice (NIJ) industry standards, which require body-worn devices to be removable in under one minute to reduce the risk of bodily harm in a vehicle accident or if urgent medical treatment is required.

Software & Data Security

The monitoring software capabilities should be carefully considered. Agencies use EM software to measure, monitor, and analyze massive amounts of data, managing alerts and client profiles, while ensuring compliance with state and federal security standards. Features like advanced analytics, cloud access, and mobile tools boost your team's ability to maintain consistent supervision and respond efficiently.

- The platform should be cloud-based, secure, intuitive, and easy to use, with compliance to FedRAMP and NIST standards.
- Evaluate if the software provides advanced analytics to calculate potential risk and identify issues early.
- Determine whether the software is available on desktop and mobile applications to enhance officer productivity in the field.
- Consider the provider's data security protocols and capabilities, such as multi-layer encryption and continuous monitoring, automated access controls, Real-time compliance reporting, comprehensive disaster recovery, and regular third-party security assessments.
- Request a software demonstration to understand platform capabilities, data management, and reporting.

Equipment Compatibility

Agencies often choose to implement other EM technologies alongside location tracking, including radio frequency, 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

While 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

As agencies look to implement or refine a community supervision program, there are several critical factors to consider. Location tracking technology continues to evolve, to enhance accountability and public safety, with new features and better integration into agency workflows. Success depends on thoughtful program design, ongoing training, and a strong partnership with a reliable technology provider. Agencies should regularly review their location tracking programs to ensure they are achieving their goals and using resources wisely.

About BI Incorporated

For more than 45 years, BI Incorporated has delivered innovative products and services that offer an alternative to incarceration for community corrections agencies supervising individuals on parole, probation, or pretrial release. BI technologies and services enable courts and correctional agencies to effectively monitor individuals and their clients to live productive lives, while ensuring compliance with conditions of release. This dual focus on accountability and community integration can help reduce recidivism and support successful outcomes.

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