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The National Crime Gun Intelligence  
Governing Board

# Crime Gun Intelligence

## Disrupting the Shooting Cycle

A best practices guide for implementing a crime gun intelligence program as part of a comprehensive violent crime strategy.

August 2018

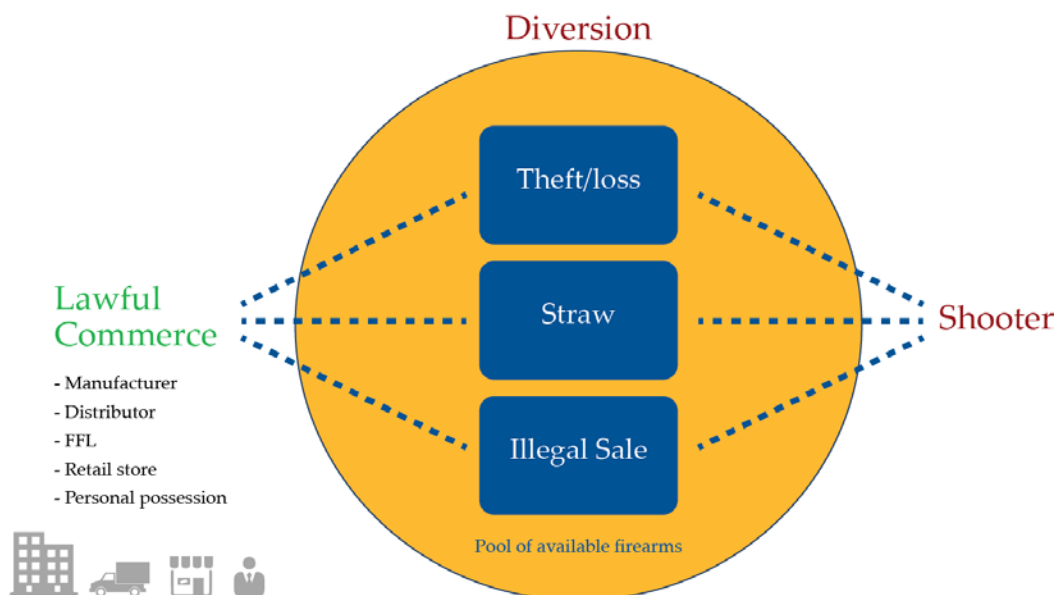
# Crime Gun Intelligence – Disrupting the Shooting Cycle

## Best Practices for implementing successful crime gun intelligence programs

Crime Gun Intelligence (CGI) utilizes evidence-based technology to provide law enforcement a unique tool to enhance comprehensive violent gun crime strategies. CGI combines all available information on crime guns and shootings to identify and disrupt the shooting cycle. Crime gun intelligence concentrates on the ways firearms are diverted from the normal venues of regulated commerce to the criminal market, seeks to intervene to prevent that diversion, and establishes connections of crime guns that have already been used. CGI reveals leads not otherwise available to assist in identifying offenders who are illegally purchasing or transferring firearms and the offenders who use them to commit violent crimes.

The use of firearms in violent crime occurs in the context of a shooting cycle. This shooting cycle in nearly every instance begins at the point of diversion of the firearm from the normal venues of regulated commerce into the criminal market. This diversion occurs through a number of different ways including firearms trafficking or straw purchase, illegal transfer of a firearm, or theft from a gun dealer or citizen. This shooting cycle continues through any number of illegal transfers and shootings and often culminates with the recovery of the firearm by law enforcement. At each point, law enforcement has the ability to use innovative technology, expert analysis, investigative and regulatory expertise, and cooperative efforts to disrupt this cycle, thereby preventing further shootings.

## The Shooting Cycle



The foundation for crime gun intelligence is the data associated with crime guns, which is exploited through the proper use of the Bureau of Alcohol, Tobacco, Firearms and Explosives’

(ATF) National Integrated Ballistic Information Network (NIBIN) and firearm tracing through the ATF National Tracing Center and eTrace. NIBIN creates high-resolution, digital images of the unique markings left by a firearm on expelled cartridge cases. NIBIN automatically compares captured images of these markings to all other entered casings in a specific geographic region or nationwide. The computerized process provides potential matches within hours, which are then reviewed by trained NIBIN technicians to make a final match determination. Through this process, NIBIN provides the ability to link shootings by ballistic evidence and link recovered crime guns to shootings.

Firearms tracing is the manual process of researching, by hand, all legal transfers of a firearm from manufacturer to retail sale. Using information unique to the firearm such as make, model, and serial number, ATF's National Tracing Center can conduct research allowing law enforcement to identify the first retail purchaser of a firearm. This information is often valuable in identifying firearms trafficking schemes, which could not only provide relevant leads to current shooting investigations but can also inform policy-makers on how best to develop strategies for interdicting illegally trafficked guns.

Developing an effective crime gun intelligence program requires commitment and cooperation. Law enforcement agencies represent the start of the crime gun intelligence process through collection of ballistic evidence and submission to the laboratory or NIBIN site. Effective programs throughout the nation have emphasized comprehensiveness and timeliness. Evidence that goes unprocessed, delays in ballistic screening, firearms not traced, and leads not acted upon result in unnecessary delays that allow the violent offender to reoffend. A study conducted by Rutgers University of NIBIN in the State of New Jersey revealed that in instances where there are two shooting events linked by ballistics through NIBIN, 50% of the time, a third shooting event utilizing the same firearm will occur within 90 days.<sup>1</sup> This conclusion underscores the critical need for the rapid and timely analysis of recovered crime guns and spent shell casings. It is therefore vital that all partners in a region's crime gun intelligence strategy commit to the timely processing of ballistic evidence in order to enhance violent crime investigations.



### **The National Crime Gun Intelligence Governing Board**

The National Crime Gun Intelligence Governing Board is an ATF administered body consisting of chiefs of police, forensic laboratory directors, ATF executives, and executives from state and federal prosecutor's offices. The Board advises and makes recommendations on national policy related to crime gun intelligence and

issues best practices for local crime gun intelligence programs. In 2018, the National Crime Gun Intelligence Governing Board established Minimum Required Operating Standards (MROS) for NIBIN. These standards, which have been issued to all NIBIN sites, include a requirement to process and enter ballistic evidence into NIBIN within two business days of receipt from the submitting law enforcement agency. This requirement seeks to provide investigators valuable leads in as short an amount of time as possible. Delayed submissions by the submitting agency

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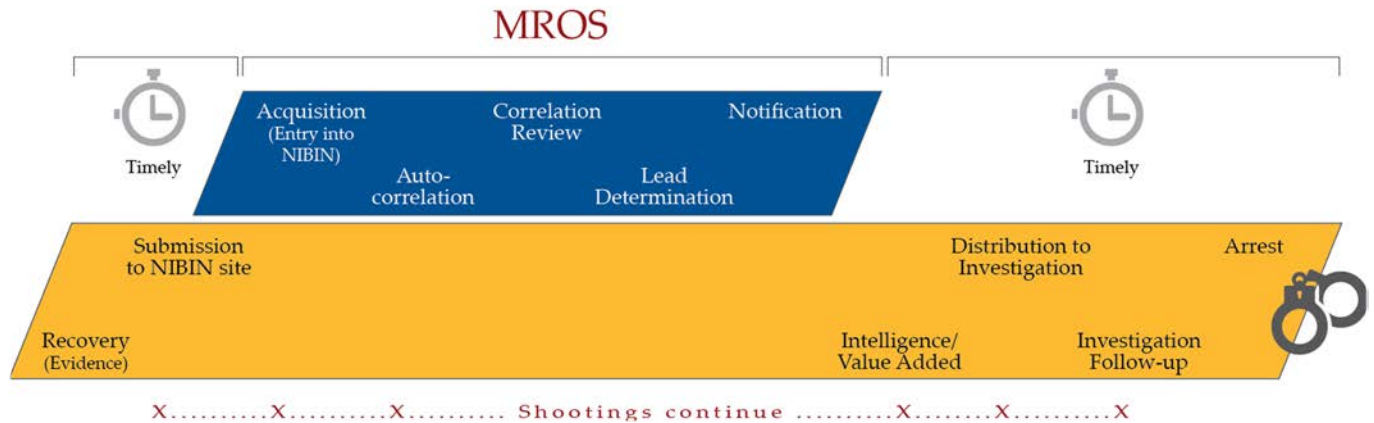
<sup>1</sup> NIBIN DATA ANALYSIS-Rutgers University, Masters of Business and Science Program 2018

stifles the intended results and deprives investigators of valuable leads. In many instances, long delays allow violent criminals to re-offend as the leads generated from CGI might have enabled law enforcement to intervene and disrupt the shooting cycle.

The following practices are recommended to implement and maintain a timely and effective crime gun intelligence program:

- Comprehensive collection of **all** ballistic evidence.
  - CGI concentrates on ballistic evidence that can be collected, screened, and analyzed to provide connections between events and people.
  - Implement policy to comprehensively collect and submit all cartridge cases and test fires into NIBIN.
  - Gunshot detection alert systems can enhance collection by notifying law enforcement of shooting events that are not reported by citizens.
- Timely submission of evidence into NIBIN.
  - The NCGIGB recommends that police agencies submit fired cartridge cases and recovered crime guns to their NIBIN site within 24 hours of collection.
- Timely and accurate firearms trace requests for all recovered crime guns.
  - Trace requests should be made the same day as NIBIN submission.
- Detailed documentation of circumstances surrounding evidence recovery.
  - Implement policy for responding law enforcement to canvas area of shots fired to support community outreach and awareness of law enforcement efforts in addressing gun violence.
- Timely transfer of all NIBIN leads to an intelligence unit such as a crime gun intelligence center.
  - NIBIN leads should be processed for additional intelligence that would add value to the lead and include things such as department incident and supplemental reports, cell tower, cell phone and social media analysis, gunshot detection system alerts, license plate readers and crime camera images to be included in an intelligence report for investigators.
- Timely dissemination of intelligence report to investigators.
  - A succinct intelligence report containing key findings of analysis such as maps, graphical representations of linkages, and person/suspect profiles should be provided as timely as possible.
  - Follow up or higher-level intelligence analysis can be conducted and provided to investigators as investigative circumstances warrant.
  - In instances where NIBIN leads or crime gun intelligence reveals a lead that has significant impact on public safety, *immediate* communication of that raw information to investigators is critical.
- Appropriate investigative follow up on CGI leads.
- Coordinated prosecution.
  - Crime gun intelligence links shootings and ties crime guns to shooting events and trafficking or firearms thefts to shooting events. A single homicide case is often expanded through CGI to include additional violent crimes, additional offenders, and multiple jurisdictions. Prosecution of violent gun crime and firearms offenses no longer occurs in a vacuum.

# Crime Gun Intelligence Process



*The necessary processes reflected above each require cooperative effort and the implementation of policy that assures timeliness at every stage.*

## **Ballistic Imaging and Correlation**

### **NIBIN Sites**

The forensic laboratory/NIBIN site plays an important role in the crime gun intelligence process. These locations are responsible for the entry of ballistic evidence into the NIBIN system and determining potential matches or NIBIN leads. ATF’s national network allows a submitted cartridge case to be digitally imaged and auto-correlated against all other images previously entered. In most instances, auto-correlation is conducted at a regional level spanning numerous jurisdictions but it can, in appropriate circumstances, be conducted nationally. Once auto-correlation occurs, specialists review the results to make human-eye determination of potential matches or NIBIN Leads. ATF’s NIBIN National Correlation and Training Center (NNCTC), which currently conducts correlation reviews for 31 NIBIN sites representing 183 law enforcement agencies, has a 98.9% confirmation rate for all NIBIN Leads generated. The NNCTC is expanding over the next two years to eventually service all NIBIN sites throughout the United States freeing up assets at local sites and allowing them to focus on timely collection and entry of evidence.

In traditional forensic firearms examinations, cases would be submitted and fall into a backlog, awaiting full examination. Each case, prioritized based on violent crime level and trial dates, would eventually be analyzed. Lower level, non-violent cases, or those not going to trial may take months or years to be analyzed. Typically, evidence was submitted into NIBIN at the end of this process. In the past, NIBIN leads were generated, too often, twelve to eighteen months after recovery. This approach is not an efficient or effective use of resources. It minimizes or misses critical investigative leads. Several successful major city police departments, including those with ISO 17025 accredited crime labs, have developed streamlined workflows to screen

firearms evidence, better use their resources, and maintain all quality standards. These sites share the following suggested features:

- Accept all submitted firearms related evidence suitable for NIBIN (crime guns for test fire and fired cartridge cases).
- As appropriate, collect any other forensic evidence, prior to NIBIN processing.
- Identify all high confidence correlations (NIBIN Leads), perform technical review, and release the lead to the Crime Gun Intelligence Center (CGIC).
  - Individual agencies may develop practices about whether they wish to have a forensic examiner confirm all NIBIN leads or to do so only upon request.

The critical key is to implement processes that combine all relevant forensic practices, **while maintaining timely notification of NIBIN leads**. There are a number of innovative and proven methods of accomplishing this. Viable options include:

- DNA swabbing of the firearm in the field by trained crime scene or law enforcement personnel.
- Prioritization and timely processing of firearms and firearms evidence for fingerprints and DNA. In this context, processing refers to sample recovery. The firearms evidence can be streamlined into a workflow, where appropriate forensic evidence is collected, and the firearms evidence is quickly returned to the firearms unit/NIBIN site.
  - Recovered forensic evidence can be stored for future analyses or immediately submitted to the appropriate unit, depending on agency policies.
  - Latent print and DNA recovery is possible on firearms. This is an agency specific policy, which should be developed in conjunction with your forensic service provider.
  - Based on available recovery data, most forensic laboratories do not attempt to recover latent prints from fired cartridge cases.
  - Use test fire processes for NIBIN entry that are not disruptive to potential trace evidence.
- Recent advances in DNA technology allow for the possible recovery of DNA from fired cartridge cases. This is agency specific, which should be developed in conjunction with your forensic service provider. If adopted, the collection of DNA should be done a timely manner with any FCCs returned to the firearms unit/NIBIN site for entry.

### **Comprehensive Tracing**

#### **National Firearms Tracing Center**

The ATF National Tracing Center (NTC) is a critical component of crime gun intelligence. Through the serial number and other relevant information from a crime gun, the NTC can track a firearm from manufacture to the first retail purchaser. In instances where firearms were illegally purchased or transferred, the trace information is important to determine the identify of individuals involved in providing firearms to the criminal market. Tracing information can also reveal interstate trafficking schemes that are responsible for diverting large numbers of firearms from the normal means of commerce into the black market making them available for use in

violent crime. More than any other CGI component, firearms tracing helps direct appropriate resources at the front end of the shooting cycle - the point of diversion.

To incorporate firearms tracing into a comprehensive crime gun intelligence program, the following guidance are suggested for recovering agencies:

- Implement policy that emphasizes the trace request of all recovered crime guns on the day of recovery.
- Ensure that trace requests contain accurate information from the firearm.
- Implement policy that quickly provides firearms trace results to appropriate investigators.
- Coordinate with the local ATF office or CGIC to request urgent traces when appropriate.
- Coordinate with the local ATF office or CGIC to request training on firearms identification for agency personnel who submit firearms traces.

### **Timely Intelligence Crime Gun Intelligence Centers**

CGICs are regional clearinghouses for firearms intelligence and data regarding firearms-related crime. They are often partnered with other intelligence entities such as fusion centers and real time crime centers. Their core mission is to provide timely and accurate intelligence to assist in the identification of shooters and their sources of crime guns. There are 25 ATF CGIC's located across the country that work in partnership with local law enforcement and intelligence units to assist with investigations and improve their NIBIN process. To effectively meet this mission, CGICs operate under five core concepts:

- **Collect**
- **Analyze**
- **Refer**
- **Track**
- **Support**

The CGIC's top priority is to **collect** information from NIBIN, firearms tracing, and police investigative reports relating to firearm and violent gun crime events. In addition, it is the CGIC's responsibility to collect related information that might include local department incident and supplemental reports, cell phone analysis, gunshot detection system alerts, license plate readers, social media exploitation and crime camera images.

Once the raw information is brought together into the CGIC, highly trained and skilled federal, state, and local personnel from intelligence, firearms industry operations, and criminal investigations work together to **analyze** and layer information to provide actionable leads. It is at this phase that commonalities between shooting events beyond ballistics, or solvability factors, are discovered adding even more value to the lead.

Timely and actionable **referrals** for investigative follow up are the hand-off point in the CGIC process. Following collection and analysis, the individual investigator is the "end user."

**Tracking** and documenting the outcome of referrals is important to the CGIC. This process will help avoid referrals that are not timely, relevant or useful to investigators. The tracking process allows for the constant evaluation of the CGIC’s effectiveness in partnership with investigators.

Lastly, the CGIC provides ongoing **support** to criminal investigations. Beyond the initial referral, investigations routinely develop new leads and new direction. The CGIC can add value to investigative information as it develops, giving investigators every possible advantage to solve cases.

### **Prioritizing Actionable Intelligence** **CGI Triage**

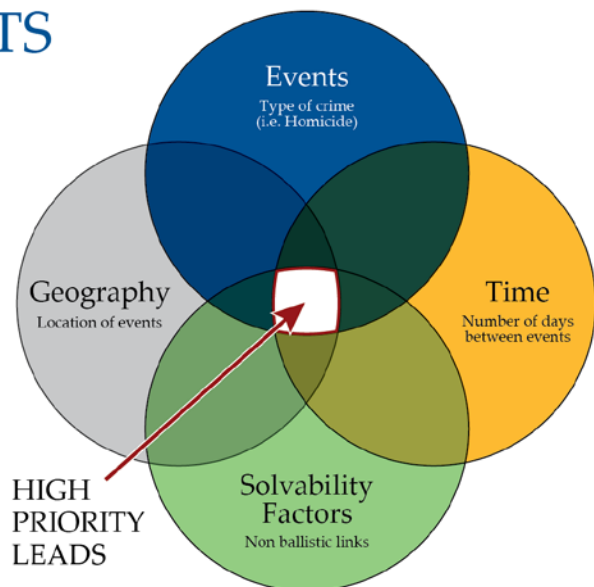
Not all crime gun intelligence is equal. Some ballistic matches or crime gun traces will be more relevant to an investigation than others. With the number of both NIBIN leads and firearms traces increasing, a system of triage is critical to assuring resources are properly allocated. The overriding goal of crime gun intelligence is to provide investigators relevant leads in violent crime cases. Leads must be viewed in a manner that ensures that those with the highest investigative potential are given priority for analysis and referral. ATF’s collective experience in this respect has developed a simple and effective system for lead triage, which focuses on four critical aspects of a CGI lead – Geography, Events, Time, and Solvability factors (GETS).

GETS is used to quickly identify CGI leads and information or intelligence that should be addressed on a priority basis. No category in GETS is weighted; rather the factors present a snapshot for prioritization of the CGI lead. Using GETS, crime gun intelligence is appropriately prioritized at the CGIC analysis phase leading to referrals that have the highest possible potential for investigative success.

**Geography** provides the physical location of all events that are involved in the shooting cycle and includes the initial and subsequent purchase/transfer of a firearm, the shooting events linked by ballistics, and the possession or recovery of the firearm. The physical location of these events tell much about the lead.

The **event** type, or what occurred, is the second factor in CGI triage. This includes primarily the initial assessment of threat to public safety based on the events involved.

## GETS





The **time** between linked events is critical to consider in determining investigative potential. Important information might include the number of days between the purchase of a firearm and its use in a shooting event, or the number of days between a shooting event and the recovery of the firearm.

**Solvability** factors are those additional pieces of information that raise the investigative potential such as a witness statement or crime camera video.

## **Investigation and Court**

### **Operational Application of Crime Gun Intelligence**

Crime gun intelligence is only informational until it is acted upon through investigative follow up and prosecution. Unfortunately, misunderstandings surround this last phase of the process. It is often assumed that a casing or recovered firearm sent through the CGI process directly results in a relevant investigative lead or arrest. This, however, is not true. As with any piece of information, CGI is relevant or useful only in context and only if acted upon.

Successful crime gun intelligence programs must have coordination with state and federal prosecutor's offices. Crime gun intelligence changes the face of violent gun crime prosecutions from a single violent gun crime investigation to a series of linked shootings involving illegal firearms transfers or trafficking. This has increased the need for cooperative effort between law enforcement and prosecutors. Any agency implementing a new crime gun intelligence program must provide training and updates to their prosecutors' offices in the earliest phases of implementation.

## **Conclusion**

The National Crime Gun Intelligence Governing Board presents this document to suggest best practices and policy recommendations for departments wanting to implement crime gun intelligence as a part of their overall violent crime strategy. CGI involves the collection and analysis of all information relating to violent gun crime and crime gun recoveries. It is an evidence-based tool that develops important leads in identifying shooters and their sources of crime guns using ballistic imaging and correlation software, crime gun trace information, and a myriad of layered intelligence. When incorporated into an overall strategy, CGI has proven its value in measurable reductions in violent gun crime through apprehension and successful prosecution of violent offenders. CGI is a lead-generating process that provides law enforcement the opportunity to intervene and disrupt the shooting cycle. The multi-jurisdictional nature of violent gun crime and firearms trafficking is addressed through standardizing practices and information sharing. Crime Gun Intelligence Centers bridge these jurisdictional gaps and play a key role in CGI programs.

The Board developed this guide drawing on the experience and expertise of its members and the organizations they represent with a single objective: Helping law enforcement make our communities safer by disrupting the shooting cycle. Experience demonstrates that best practices deliver best results. We hope these best practices help each of you save lives and bring justice to victims of gun crime. Good luck and be safe.

On June 28, 2016, unknown suspect(s) killed James Tamplin in Cincinnati. The Cincinnati Police recovered casings from the scene and entered them into NIBIN.

On July 6, 2016, Cincinnati Police stopped Coron SMITH and Devarieh RIGGINS for driving in a stolen car. They also recovered two firearms from the car and entered them into NIBIN. NIBIN linked one of the guns to Tamplin’s murder. On March 7, 2017, investigators charged SMITH and RIGGINS for the murder.

On January 29, 2018, a court sentenced SMITH to 18 years in prison. On February 2, 2018, a court sentenced RIGGINS to 50 years to life in prison.

A horizontal timeline of seven colored boxes representing key events in the James Tamplin case:

- Central Region:** Represented by a map of the United States and the Cincinnati Police logo.
- Jun. 28, 2016 Murder:** Represented by a handgun icon.
- Jul. 6, 2016 Gun Recovered:** Represented by an icon of a car with a starburst, indicating a recovery.
- NIBIN Link:** Represented by a bullet casing icon.
- Mar. 7, 2017 Arrest:** Represented by handcuffs icon.
- Jan. 2018 Trials:** Represented by a gavel icon.
- Jan. 29, 2018 / Feb. 2, 2018 Sentencing:** Represented by a prison cell icon.

On July 27, 2017, Troy, New York, Police arrested Kewon JOHNSON and recovered a Glock handgun. JOHNSON, a convicted felon, admitted to possessing the Glock, and NIBIN linked it to a July 22, 2017, shooting in Albany that left three people injured. Albany Police suspected JOHNSON, but the victims would not cooperate with the investigation. JOHNSON pleaded guilty to possession of the firearm. At sentencing, the judge found that the preponderance of the evidence, including the NIBIN Lead, justified a four-level enhancement and sentenced JOHNSON to 7 years in prison.

A horizontal timeline of seven colored boxes representing key events in the Kewon JOHNSON case:

- Eastern Region:** Represented by a map of the Eastern United States and the Troy Police logo.
- Jul. 22, 2017 Shooting:** Represented by a handgun icon.
- Jul. 27, 2017 Gun Recovered:** Represented by a handgun icon.
- NIBIN Link:** Represented by a bullet casing icon.
- Aug. 3, 2017 Arrest:** Represented by handcuffs icon.
- Nov. 16, 2017 Guilty Plea:** Represented by a gavel icon.
- Jun. 27, 2018 Sentencing:** Represented by a prison cell icon.