

# Law Enforcement Information Framework

The Pacific Northwest National Laboratory (PNNL) has devoted years of research and development to finding better, faster, easier ways to get the right information to the right people at the right time. This framework allows officers and responders to collect, share, and analyze large volumes of data that often come from many different sources in many different forms, both at the desk and in the field.

## Meeting the information needs of first responders

PNNL has partnered with the Department of Homeland Security to develop an information and analysis framework specifically for the first responder and law enforcement community. Providing better access to richer information, in real time, its law enforcement information framework will revolutionize information-led policing.

## Capture critical data in real time

The ability to capture many different pieces of data in the field or during an incident and immediately make it available for analysis is critical given the time sensitive nature of first responders' work. PNNL's law enforcement information framework provides an environment for larger volumes of existing and newly collected data to be combined and organized in ways that facilitate more effective decision making. It enables real time collection of multimedia information such as images, video, text, sketches, and audio, and automatically readies it for rapid dissemination and analysis.

## Share information quickly and easily among key team members

Keeping team members on the same page is critical to the success of investigations. PNNL's law enforcement information framework makes it easy to connect teams, both at command and in the field, using private communications networks that are customizable to the varied characteristics of each team. Now the right information can more quickly and easily be shared among the people it affects – and no one else.

## Make more effective decisions through information-rich analysis

PNNL's law enforcement information framework is composed of a collection of powerful information analysis tools designed to help users get the most out of their data. It has the capability to organize, translate, and make available for analysis an extremely large volume of different kinds of data, such as incident reports, daily briefs, and booking records. Its embedded tools automatically look for patterns in the data based on topics, trends, geography, and other relationships, and allow it to be visually represented for analysis based on officer-provided parameters. It also memorizes the ways in which data is requested by users, and allows these actions to be repeated for future searches by anyone who accesses it. This enriched, evolving analytical functionality enables teams to more efficiently and effectively deploy their resources, resulting in continuously more productive investigations.



## Easy to implement, simple to use

Designed for a broad user base, PNNL's web-based framework is easy to implement, with very little time needed for training and familiarization with the interface. The framework uses existing law enforcement data standards, and is compatible with a wide range of devices. Its mobile capability can be accessed using commodity smart phone hardware, eliminating the need for additional specialized equipment in the field. Teams will quickly reap the benefits of having more usable data at their fingertips, adding tremendous value to their investigations using a single application framework.

## Application Examples

PNNL has developed three prototype applications based on its law enforcement information framework, and is currently partnering with first responders across the nation to further improve their respective functionality for broader deployment.

### Analytics application

The more information decision makers have to work with, the better their ability to fully analyze an incident. PNNL's robust information framework allows access to more diverse information than historically available through existing law enforcement information sources, and includes the unique ability to translate a wide range of forms and reports into formats usable for analysis. It is also easily incorporated into existing systems. Analytical components in the framework detect patterns, trends, and relationships between new and existing data, providing real time updates on a constantly streaming basis. Users gain

access to more data than they have ever had before, and also have the necessary tools at their disposal to more effectively use all of the data available to them for improved investigative performance.

### Mobile awareness application

PNNL's mobile awareness application is capable of fundamentally changing how information is shared within law enforcement organizations. Multimedia information can be gathered in the field and instantly pooled with information in existing databases to immediately begin detecting useful relationships. Working in concert with the information framework's desktop-based analytical tools, mobile interconnectivity quickly facilitates thorough, well coordinated, effective investigations. Its capability to automatically push relevant new information to key team members,

PNNL is currently transitioning its analytical application, including the enhanced mobile capability, to front line law enforcement and counter-terrorism personnel at the San Diego-area Automated Regional Justice Information System (ARJIS) and the Port Authority of New York and New Jersey (PANYNJ). One user of the application recently applauded the application and the collaborative development process.

"It's not very often that regular street officers that utilize the systems daily in the field get to add our two cents. Please pass along many thanks to ARJIS personnel and the funding agencies involved. I hope they realize that the systems they fund and create may help save an officer's life some day."  
*Officer, Department of Homeland Security Immigration and Customs Enforcement*

track the location of personnel for improved officer safety, and operate on commonly available handheld mobile devices such as cell phones and personal data assistants, greatly enhances team situational awareness.

### Commanding officers' application

Commanding officers have to make critical decisions quickly, often in the midst of constantly changing conditions. PNNL's commanding officer application allows for improved statistical analysis of traditional crime data, with real time updates to keep decision makers abreast of changing conditions, and provides an interface to send and receive critical information between team members at command and in the field. This enables more efficient and effective coordination and deployment of resources, resulting in higher quality service to the public.

#### Commercial Licensing Opportunity

The law enforcement information framework is now available for commercial licensing, contact:  
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