Automatic number plate recognition (ANPR)

This page is from APP, the official source of professional practice for policing.

First published 23 October 2013 Updated 15 February 2023
Written by College of Policing
8 mins read

During any investigation, the question ‘was or could a vehicle have been used?’ should always be considered. If so, ANPR (Automatic Number Plate Recognition) technology can potentially help without any details of the vehicle(s) being known in advance.

ANPR can identify a vehicle of interest based on its number plate. However, identification should not replace other investigative enquiries and officer discretion.

ANPR automatically reads vehicle registration marks (VRMs) for comparison against database records. The police and government agencies use ANPR as a tactical option to disrupt, prevent and detect criminal activity. ANPR is also used by commercial companies, for example, garages, shopping centres and car parks.

Basic knowledge requirements

Investigators need to understand how ANPR data can assist them. They should:

- understand how ANPR works
- know how the data can be accessed and analysed to assist their particular investigation
- understand that ANPR data, which is not part of the National ANPR Service (NAS), may be held by a private company, commercial service or local authority, therefore investigators will need to identify and retrieve this data in a similar way to **CCTV**
- know how to present ANPR material as evidence, taking into account its sensitivity, and **NASPLE** requirements
- know how to use ANPR data to address investigative intelligence gaps – ANPR can be integrated with other data sources to do this

Investigators will be supported by:

- force analysts who can research ANPR data using current analytical tools
- the NAS to resource national searches for the most serious offences
- subject matter experts who can use the NAS to research ANPR data

For further information on the potential use of ANPR, practitioners should consult their local ANPR tactical adviser, ANPR manager or contact the NCA **Major Crime Investigative Support team**.

See also **material**.

National ANPR Service (NAS)

The NAS is a single source of national data, which has standardised functionality to support operational response, investigations and intelligence.

It records the location for all types of ANPR cameras in a standard format as required by National Standards for Policing and Law Enforcement (**NASPLE**).

National ANPR Standards for Policing and Law Enforcement (NASPLE)

The **NASPLE** set out the requirements which police and other law enforcement agencies (LEAs) must comply with to access the National ANPR Capability (NAC).

Data from the NAC cannot be used for non-LEA purposes. However, in appropriate circumstances, a camera may provide data to both the NAC and those organisations listed at Annex A of the NASPLE, for independent management.

The NASPLE has three sections.

- Part 1 – Data Standards, which define the compliance requirements for ANPR data.
- Part 2 – Infrastructure Standards, which define the compliance requirements for ANPR infrastructure.
- Part 3 – Data Access and Management Standards, which define the access requirements for LEAs and other organisations that are associated with ANPR data for law enforcement purposes.

The NAC

The NAC comprises of:

- the NAS
- the National ANPR Infrastructure (NAI) is a network of ANPR cameras, communications links, firewalls and other related supporting components (that are the responsibility of the police and LEAs) that connect to the NAS

ANPR in investigations

ANPR provides valuable information in investigations. It can help when no specific information is known about the target vehicle(s). ANPR should always be considered where it is known or believed that a vehicle is involved in an investigation or incident.

Staff with experience of conducting investigations using the functionality of the NAS can provide advice and assist with investigations.

ANPR data, when considered with other sources of information, such as crime and incident data, intelligence, CCTV and DNA data, can provide material which supports the overall direction of an investigation or specific lines of enquiry. It can enhance the intelligence picture, identify where and when a vehicle has travelled and provide enforcement opportunities. ANPR can also assist in both reactive and proactive investigations, to support witness and suspect strategies and to identify vehicles and potential persons of interest.

Investigations

Basic searches of ANPR data can be used to help in any investigation where a vehicle is possibly involved. The data can help to:

- locate lost or stolen vehicles
- identify the movements of a vehicle(s) involved in a crime and information associated with vehicle(s)
- research the movements of the victim’s vehicle to assist with victimology
- research alibis

- identify the vehicle(s) in a particular location during particular time periods to assist in identifying a suspect, potential victims, or potential witnesses, for example, linking crimes or identifying witnesses to an incident

ANPR data can also be cross-referenced and integrated with data from other sources, to enhance information and intelligence.

A marker against any vehicle on the NAS used in an ANPR operation must be supported by reliable intelligence. Investigators should remember that ANPR provides data on a vehicle's movements but not on an individual's movements.

Alibis

The absence of a vehicle on an ANPR system does not necessarily eliminate the possibility of a vehicle's or indeed a person's presence in a particular place at a given time. In complex or serious cases, it may be appropriate to reconstruct a journey given in an alibi.

Mobile operations

Mobile ANPR systems can be deployed within a short amount of time to support an urgent deployment or incident response where consistent with the circumstances detailed in **NASPLE**.

Mobile teams can use ANPR information from the strategic road network (SRN) to identify suspect vehicles that have been lost. This information can also be used to trigger further investigative actions, which means that the target does not need constant monitoring.

Advantages

ANPR:

- can produce accurate geographic location data
- is an easily searchable system
- can be accessed or deployed quickly
- is a relatively low-cost system
- can allow the investigator to monitor several vehicles at the same time

ANPR retrieval and analysis

The data produced by ANPR systems can be used for intelligence processes, operational policing and investigations. It can be searched to find specific information or analysed to identify crime trends and hot spots.

Analysis

ANPR systems can produce large quantities of data, and not all of this data will be relevant. Anyone commissioning a search or **analysis of ANPR** data should consult their ANPR team or an experienced ANPR investigator to determine the appropriate parameters for the work, and to identify the products that can be provided and how they may assist the investigation.

Structured searches using specialist software

Parameters for searches should be proportionate and justified. Searches must comply with **data protection requirements** and **NASPLE**. Focused search parameters will help to produce more accurate results relevant to the policing purpose.

Structured searches using the NAS

A number of structured searches can be supported by the NAS. Data can be sorted within the NAS, especially where large volumes of data are available.

For further information see **APP on analysis**.

ANPR analysis

Any tasking of analytical resources should include discussion of the use of various sources of information, including ANPR data, although this may not be specified in the terms of reference. Analysts will then select the appropriate technique for the task at hand.

Crime pattern analysis

When a trend, series or hot spot has been identified, ANPR data can assist either in developing a picture of vehicles in the relevant location at identified times of the day. Hot spots are locations with significantly higher than usual levels of crimes and/or incidents.

The environment

The environment plays an important part in crime data development. Most offending behaviour is concentrated within certain, small geographic areas. This can lead to the development of a trigger plan, such as an arrest plan. Stopping a target vehicle may be possible to prevent a crime being committed.

Positioning ANPR cameras

Through crime pattern analysis, there is also an opportunity to identify potential future sites for both permanent and mobile ANPR cameras. Assessing road traffic data and analysing crime and disorder hot spots may help to identify key routes and significant time periods, leading to more accurate ANPR deployment. Any deployment should be consistent with **NASPLE**.

Incident analysis

ANPR data can be used in serious and major investigations. For example, it can be used to refute or verify alibi statements and to locate offenders. ANPR can also identify potential witnesses to specific incidents by identifying vehicles in the location at the time of an incident.

Results analysis

A review of the effectiveness of policing activity should be discussed and agreed at the start of an investigation or operation to set objectives to measure said effectiveness.

A review or **results analysis** is particularly useful when the response or activity is unusual, or where significant resources have been or are committed to the activity. Reviewing activity can lead to the development and improvement of practices and policy.

An evaluation of the use of ANPR and its contribution following an investigation or intelligence gathering initiative is an important part of results analysis. If ANPR was not used, any missed opportunities should be identified to ensure that the lessons learned are used in future investigations.

Tags

Investigation