

Retrospective facial recognition (RFR) to identify suspects of acquisitive crime

Using retrospective facial recognition (RFR) in the force crime management system to identify suspects of acquisitive crime.

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Key details

Does it work?	Untested – new or innovative
Focus	Prevention
Topic	Crime prevention Intelligence and investigation Neighbourhood crime
Organisation	Cheshire Constabulary
HMICFRS report	PEEL 2023–25 Police effectiveness, efficiency and legitimacy: An inspection of Cheshire Constabulary
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Region	North West
Partners	Police Business and commerce

Key details

Stage of practice	The practice is implemented.
Start date	September 2024
Scale of initiative	Local
Target group	Offenders

Aim

The aim of using retrospective facial recognition (RFR) is to support investigations by identifying offenders and patterns of acquisitive crime across Cheshire.

Intended outcome

The intended outcomes of RFR are to:

- increase the number of acquisitive crime offenders identified
- increase the number of CCTV submissions to the forensic team
- improve the number of RFR successful matches that lead to a conviction
- improve investigations standards by using facial recognition

Description

Cheshire Constabulary's forensics department initially developed RFR using the Police National Database (PND) facial recognition technology and in 2022, RFR was trialled using images from historical cases.

In 2024, the force built an in-house application within Niche, the force crime management system, to enable officers to submit images for facial recognition comparison. This is accessible to officers

and staff on their mobile devices. The images are stored on NICE investigate (digital evidence management system). If the RFR finds a successful match(es), it automatically exports the images and footage from the 'caught on camera' system. Prior to the launch of RFR, a staff member would have had to manually export the images and footage.

Reviewing CCTV footage

RFR enables officers and staff to view footage and choose what images they use to get the most accurate matches. This can involve capturing different angles of suspects' faces or cropping images. Image quality can also be enhanced to enable more chance of a successful match.

Two members of staff independently check and then discuss every match to avoid the misidentification of suspects. The RFR is managed by three members of staff who have received training on the Federal Bureau of Investigation (FBI) facial comparisons technology. Facial, DNA and fingerprint evidence are all collated by a forensic intelligence officer to provide identification of suspects of acquisitive crime patterns.

Monitoring the use of RFR

Officers and staff from all departments are encouraged to use RFR, with the force integrating the initiative into investigation plans and reviews. The number of successful matches is regularly recorded and shared at the monthly governance meetings to identify trends and areas for improvement.

A chief inspector, who is the force's facial recognition lead, holds regular meeting with area commanders to share the number of successful matches and the performance of teams. Performance packs are also used at quarterly performance meetings with the senior leadership team (SLT).

Cheshire Constabulary provide approximately £60,000 a year to fund the development and implementation of RFR.

Overall impact

- between June and August 2024, the team reviewed 873 cases, from which they identified 126 suspects

- the percentage of successful matches has increased from 5% when RFR was first implemented to 12%
- RFR has been welcome by officers and staff as it enables a more efficient approach to identifying suspects
- Cheshire Constabulary have supported Greater Manchester Police, West Mercia Police and Derbyshire Constabulary to identify suspects of acquisitive crimes

Learning

- Certain types of images are more likely to provide a successful match. The force reviewed how images can be cropped to enhance recognition and found that leaving only a couple of millimetres of background is most effective for a successful match. This guidance is not definitive, as in some cases a wider crop can also lead to a successful match.
- It is important to use RFR at the earliest opportunity. The force have publicised using RFR on the intranet and the technology is mentioned regularly in meetings.
- It is essential to provide training to officers and staff on how to use RFR. In force training has been delivered to officers and staff to identify the best quality image before submitting for RFR to prevent the likelihood of not receiving a successful match. False positives can lead to officers locating, arresting and interviewing the wrong people, causing unnecessary disruption to communities and undermining public trust.
- It is important to monitor submissions from officers and staff to understand how RFR is being used. This includes which areas in the force are submitting images from which type of crimes and what happens with successful matches.

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