LIVE FACIAL RECOGNITION

The case for coordinated national expansion

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October 2025

LEAPWISE

Foreword

For too long, policing has been held back by outdated technology, cumbersome processes, and unnecessary bureaucracy. The Metropolitan Police Service is changing that, embracing a new, invigorated approach to data and technology that is transforming how we protect Londoners.

Our investment in cutting-edge technology is making us more capable, more productive, and more focused. Nowhere is this more evident than in our pioneering use of Live Facial Recognition (LFR). Put simply, it's a game-changer. And it's one that is helping us bear down on crime in the capital.

LFR has revolutionised hotspot policing, allowing us to target our resources with unprecedented precision. We can now locate wanted individuals – including those with court-imposed conditions, such as sex offenders or stalkers – more quickly and effectively than ever before.

The technology works by scanning faces in public spaces against a pre-defined watchlist, alerting officers when there is a potential match. Crucially, every alert is subject to human judgement, ensuring that engagement is always appropriate and proportionate.

The results speak for themselves. Since the start of 2024, we have arrested over 1,300 people using LFR, including more than 100 registered sex offenders found in breach of their conditions. At the 2025 Notting Hill Carnival alone, LFR enabled 61 arrests – including 16 for serious violence and 13 for violence against women and girls – helping us deliver one of the safest Carnivals in recent years. These outcomes are not just numbers; they represent safer communities and greater public confidence.

Importantly, the technology has evolved. Early deployments, such as those at Notting Hill Carnival in 2016 and 2017, were marked by high error rates and limited effectiveness. Today, independent testing by the National Physical Laboratory confirms that our algorithm is accurate and we understand how to use the technology in a non-discriminatory way. Our operational practices are governed by strict safeguards and transparency. We publish detailed deployment data, and our approach is subject to ongoing scrutiny and improvement.

Public support for LFR is strong: 85% of Londoners back its use to tackle crime and target dangerous offenders. Over the Notting Hill Carnival weekend, I spent time with officers on an LFR deployment. Every officer I spoke to was energised by the tool's potential, and our communities are seeing the benefits.

But as LFR is rolled out to more forces across England and Wales, we must ensure that its use is consistent and effective everywhere. That means moving beyond local innovation to a national model of coordination. This is why I support police reform that enables the proper, once-and-for-all rollout of technology like LFR.

Reform is not just about new tools. It is about building the infrastructure, clarity, and professional standards that allow technology to strengthen, magnify, and enable what our determined, compassionate, and often heroic officers do for our communities. Technology gives officers more time and better situational awareness, so they can do what only humans can do: listen, support, prevent crime, and bring offenders to justice.

Sir Mark Rowley

Commissioner of the Metropolitan Police Service

Executive summary

Since its first introduction in June 2015, police use of live facial recognition (LFR) technology has evolved dramatically. Initially driven by two pioneering forces – the Met and South Wales Police – it has shifted from a niche set of early trials to an increasingly mainstream policing tactic.

Exclusive analysis of police deployment data by Leapwise has found that LFR has been deployed 613 times by police forces in England and Wales since 2015, yielding 3,751 'true' alerts and 2,655 enforcement actions (e.g. arrests or cautions.) Furthermore, 2025 is now the second year running in which LFR has yielded enforcement action over 1,000 times in a calendar year. The Met alone has made 1,343 arrests due to LFR during the lifetime use of this technology.

There remain obvious risks and dangers from LFR – as set out in detail in this paper – but the case for this technology is now stronger than ever, supported by independent testing and an improving evidence base. Technological improvements and practice changes have yielded significant increases in accuracy. This is evident in even the most controversial deployments. LFR use at the Notting Hill Carnival in 2016 and 2017 was highly ineffective – yielding 97 alerts, of which 96 were false. But by the 2025 Carnival, the picture on accuracy was dramatically different, with 96 of 98 LFR alerts accurate.

The most recent governments of both main political parties have favoured LFR use and the Home Office has recently funded a major rollout of 10 LFR vans to 7 additional forces. This expansion is a defining moment, bringing new opportunities for public safety benefits, but also significant vulnerability.

Inexperienced forces may make mistakes or adopt poor practice that leads to negative stories, legal challenges, and a loss of public trust and confidence. Without strong national coordination and adherence to best practice, the potential of LFR could be undermined at a crucial moment for policing.

Recommendations

To ensure that LFR is deployed as effectively as possible, this paper recommends creation of a new national coordination capability for LFR. This would include elements operating at 4 levels:

1. **National control** – a stronger centre (likely within the planned National Centre of Policing) with national ownership and responsibility for key support services, including LFR procurement and options identification, algorithmic testing (in conjunction with the National Physical Laboratory), role definition, and development of training offers. This should be headed by a full-time national lead responsible for police biometrics (including LFR).

2. **National coordination with locally delivered or co-delivered activities** – national coordination and standards-setting embedded through force-level action, including national development of LFR best practice rules, collation and analysis of LFR deployment statistics, and identification of R&D priorities and research commissioning. All of these central coordination capabilities should be complemented by appropriate local autonomy.

3. **Local autonomy and responsibility** – areas where a local force should be empowered to make decisions, including general autonomy over which (if any) nationally-identified LFR solutions to deploy, where and in what circumstances to use them, watchlist composition (within some reasonable limits), and community engagement activities around LFR use in each force area.

4. **Legal certainty** – a single legal framework around police use of biometrics (including LFR) to be developed by the end of the Parliament at the latest. This should clarify the complex legal-regulatory environment around this technology, facilitate a public debate around LFR, and provide future-proofing such that next-gen biometrics are covered by this framework.

Author's note

I first began working on this topic in 2022, as a journalist covering the development of live facial recognition (LFR) among other policing topics. Two years later, I published a detailed thematic report 'Facing the future: the rise of facial recognition in policing' for Policing Insight, documenting LFR use across Australia, Canada, England and Wales, Ireland, the Netherlands, New Zealand, Sweden, and the USA. That was informed by interviews with 34 experts from across the globe – police leaders, politicians, academics, lawyers, campaigners, and more – and seeing the technology live in action.

I'm grateful to Leapwise for publishing this follow-up piece, which presents my own views and recommendations for a national coordination model for police LFR in England and Wales.

While the bulk of time spent on this paper involved desk research and collating data from published LFR deployment records, I have also carried out a small number of interviews with experts inside and outside policing. I am hugely grateful for the time and insights shared by the following:

- Professor Sir John Aston, Pro-Vice-Chancellor for Research, University of Cambridge and former Chief Scientific Adviser, Home Office
- Lindsey Chiswick, National Lead for Facial Recognition, NPCC and Director of Performance and Insight, Metropolitan Police Service
- Ben Gwyer, Facial Recognition and Streaming Technology Lead, South Wales Police
- Stacey Rothwell, Director, Eastern Region Innovation Network (ERIN)
- Professor Paul Taylor, UK Chief Scientific Adviser for Policing, NPCC
- Jamie Townsend, former Head of the Facial Recognition Technologies Unit, Metropolitan Police Service and Director, True Recognition Limited
- One additional interviewee who preferred not to be named publicly

These interviews were used to inform thinking and test potential policy recommendations but were generally not quotable. Where I refer to developments in policy or LFR deployment practice, these reflect my understanding based on a breadth of conversations rather than comments from any single individual. All deployment data was collated and analysed from publicly available police records.

Thanks are due to Lindsey Chiswick, Professor Paul Taylor, and Tom Gash for providing detailed comment on an earlier draft. Additional thanks to the Met Commissioner (and his media team) for contributing the foreword above and to Rick Gardner for production support and accuracy checks.

All views and any mistakes found here remain those of the author alone.

James Sweetland

Senior Consultant, Leapwise Advisory

Introduction

There are different ways to tell the story of how LFR has been developed and deployed as a policing tool in England and Wales.

One account might revolve around the much-contested legal basis for LFR. This would emphasise the evolution of the complex legal and regulatory framework that governs LFR, the infamous R (Bridges) v Chief Constable of South Wales Police case that looked set to block LFR deployment, ongoing lawsuits, and recent Government promises to construct a more cohesive framework to support its use.

Another might look at the technology itself: the debate around the accuracy of successive LFR algorithms which has remained fractious, even as the proponents' case has strengthened over time. There is also an intriguing sociological story here about how Western norms around technology have changed dramatically over time, driven more by smartphones and social media than state surveillance.

Notting Hill Carnival

But perhaps a more grounded way to approach this topic is to talk about the spaces where LFR has already been deployed, beginning with Notting Hill Carnival.

The policing of this enormous street party in West London every year inevitably invites controversy, with some feeling the public conversation about the event focuses too much on the actions of a criminal minority, while others argue that the safety risks aren't appropriately managed by the Metropolitan Police Service. But Carnival has also served as the site for several significant LFR deployments, each attracting that same controversy, but with strikingly different operational outcomes.

The Met's first-ever LFR deployments took place at Notting Hill Carnival in 2016 and 2017. In 2016, 12 hours of LFR use (via a camera attached to a 'boom') yielded only 1 alert – and this alert was false.[1] In 2017, LFR was deployed from a vehicle and produced 96 alerts – of which 95 were false.[2] On this evidence, LFR's effectiveness seemed extremely limited, with similar deployments by South Wales Police in 2017 showing similarly poor outcomes.[3] In a letter published this year, now Met Commissioner Sir Mark Rowley accepted that this previous use "did not build public confidence", adding: "At the time, the technology was in its early stages and the algorithm's performance was limited."[4]

However, this early evidence does not match the current picture around effectiveness. This year, the Met announced its intention to deploy LFR around the 2025 Notting Hill Carnival. The outcomes of those deployments showed almost the exact inverse of the 2017 outcomes. In the four deployments over the two days of 2025's Carnival, the Met's LFR use yielded 98 alerts – of which 96 were correct identifications, leading to 61 arrests and 5 other pieces of enforcement action.[5]

Event	Total hours	Total alerts	True alerts	False alerts
2016 Notting Hill Carnival	12 hours (across x2 days)	1	0	1
2017 Notting Hill Carnival	12 hours (x2 days)	96	1	95
2025 Notting Hill Carnival	36 hours (x2 days; x4 deployments)	98	96	2

Figure 1: Metropolitan Police Service LFR deployment data for 2016, 2017 and 2025 Notting Hill Carnivals

However, while the apparent effectiveness of LFR across this period has transformed dramatically, not everything has changed. Nine years apart, the key battlegrounds on which proponents and opponents argue

[1] Metropolitan Police Service Live Facial Recognition Trials (2020).
[2] Metropolitan Police Service Live Facial Recognition Trials (2020).
[3] South Wales Police all deployments for Live Facial Recognition (2025).
[4] Met Commissioner Letter (2025).
[5] Metropolitan Police Service LFR Deployments 2025 (2025).

about LFR remain similar. Core areas of dispute – accuracy and bias, public safety vs privacy protection, deterrent benefits vs chilling effects, and legal certainty – have all endured.

But wider practice *has* meaningfully evolved. Across the hundreds of deployments carried out by the Met and other forces from 2016 to 2025, both the technology itself and the wider enabling architecture around LFR have improved in ways that the public should find reassuring. When the Met Commissioner claims that there has been "considerable progress" around LFR, this view is justified.[6] Those who were more sceptical of LFR in the past – the author was one of them – should feel more confident about this policing tool than they would have done even a few years ago.

LFR's defining moment

This evolving evidence base isn't the only reason why LFR deserves extra attention now. The more fundamental reason is that we are entering a defining moment in the development of this policing tool.

The recent Home Office-funded rollout of 10 LFR vans has expanded the number of forces with a permanent capability of this type from just 3 to 10 overnight.[7] At the same time, the Government is working on a new legal framework for the technology, with a consultation on this opening shortly.[8] In addition, the planned creation of a new National Centre of Policing – announced by the Home Secretary in November last year following a joint Leapwise-Police Foundation report – could also transform how technologies and tools like LFR are coordinated and standardised on a national scale.[9]

This creates a defining moment of opportunity and risk for policing. Successful LFR use across a growing number of forces could see this technology widely recognised as an invaluable policing tool, with national developments potentially yielding a more cohesive legal framework and greater operational coordination balanced by robust safeguards. But the risks are great too. New forces taking on LFR are, by definition, inexperienced users of these tools. Mistakes or poor practice in any one of those new forces could harm public trust and confidence in these tools more widely, especially as those opposed to LFR will be ready to launch legal challenges where they see forces failing to meet high standards.

Reflecting that context, this paper explores how a national coordinating approach could help policing in England and Wales maximise the opportunities and minimise the risks from LFR in the years ahead. The paper proceeds through three chapters:

1. **The Development of LFR** – an account of what LFR is, how and why it is used by the police, and its development as a police tool in England and Wales from first trials in 2015 to the more sophisticated model used today. This chapter also includes exclusive Leapwise analysis of police LFR deployment data from 10 forces between June 2015 – September 2025, highlighting trends in practice and impact over time.

2. **The Case for LFR** – the author's case for LFR as an effective policing tool, encompassing long-running debates about public safety benefits, bias and accuracy, privacy, public support, chilling effects, evolving police practice, and the legal basis for this often-controversial technology.

3. **A National LFR Coordination Capability** – how a more cohesive approach to coordinating police LFR use could ensure adherence to best practice standards, even as a national rollout equips more forces with the power to deploy this technology. This chapter includes detailed recommendations around what a national LFR coordination capability could look like.

This paper does not provide all the answers, nor can it provide an exhaustive account of the past decade of LFR use across England and Wales. My aim is simply to persuade readers that LFR can be a valuable policing tool

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[6] Met Commissioner Letter (2025).
[7] GOV.UK - Live Facial Recognition technology to catch high-harm offenders (2025).
[8] GOV.UK - Live Facial Recognition technology to catch high-harm offenders (2025).
[9] GOV.UK - Home Secretary announces major policing reforms (2024).

when used carefully and that national coordination to support its wider rollout can provide public safety benefits while protecting trust and confidence among citizens.

1 The Development of LFR

Unlike with some other policing tactics, awareness of LFR is still understandably mixed among the public. Though it was first deployed over a decade ago, it has still only ever been used by a small minority of police forces in England and Wales. Until August 2025, only the Met, South Wales, and Essex had any standing LFR capability of their own.

This chapter, therefore, provides a brief explanation of what LFR is, how it works, and how this policing tactic has developed to its current state today. It also provides an initial exploration of the legal and coordination frameworks around LFR, as well as future-focused applications, to provide the foundation for the wider case set out in Chapter 2 below.

1.1 What is LFR?

A simple definition of LFR is provided by South Wales Police, one of the forces that has pioneered this technology. Its website states that LFR: "compares a live camera feed of faces against a predetermined watchlist to find a possible match that generates an alert."[10] The Home Office provides a similar description: "The technology uses live video footage of crowds passing a camera and compares their images to a specific list of people wanted by the police. The technology can precisely pick a face out of a dense crowd, something which would be impossible for an officer to do."[11]

In essence, a police LFR system is a facial identification tool. It scans a face (using a camera) and captures its features and characteristics: instead of a fingerprint, it's a 'face print.' It then compares that captured image near-instantaneously with all the facial images of the wanted people stored on a supplied police watchlist. If the face caught on camera is a sufficiently close match to one in the database, the LFR system will ping an 'alert' – letting police personnel on the ground know that this may be their wanted individual.

More detailed explanations of this can be provided, some of which will be covered through the rest of the paper, but the above provides a good sense of what defines LFR as a policing tool.

1.2 Why is it used?

The underlying purpose of police LFR – at least in its basic functionality – is to help police forces locate wanted people (this may be criminal offenders or vulnerable individuals, including missing persons) and reduce the harm they may cause to themselves or others.

But this doesn't quite capture the full gamut of public safety benefits that LFR is intended to deliver. As Figure 2 shows, the stated purposes for LFR use included in Met and South Wales Police deployment records point to a more nuanced understanding of why this tool can be beneficial.[12]

[10] South Wales Police Facial Recognition Technology (2025).
[11] Home Office Police use of Facial Recognition: Factsheet (2023).
[12] Metropolitan Police Service LFR Deployments 2025 (2025); South Wales Police all deployments for Live Facial Recognition (2025).

The Met lists five LFR purpose references for its 2025 deployments:

- To support the policing of crime hotspots
- To support the policing of missing person hotspots
- To support the protection of critical national infrastructure protective security operations
- To support the protection of event protective security operations
- In response to specific intelligence concerning the location of sought persons

South Wales Police lists two simpler deployment types in its 2025 records:

- Proactive
- Event

Figure 2: Metropolitan Police Service and South Wales Police LFR purpose details

Throughout interviews for this project and in the wider discourse around LFR, police leaders and proponents of the technology tend to point towards four main potential public safety benefits:

1. **Improved ability to locate and identify wanted people** – LFR makes it easier to find people who the police are looking for because the technology is effective and has a much greater capacity to 'recall' and analyse faces than police officers can ever manage. This holds both for those wanted in relation to criminal incidents (e.g. persons with outstanding police or court warrants for arrest) and those wanted in relation to non-crime issues (e.g. missing persons or other highly vulnerable individuals.)
2. **Effective deterrence of criminals in public spaces** – because LFR makes it easier to help identify wanted people, it also offers a potential deterrent benefit. Those who are already wanted would be expected to avoid visiting spaces where LFR is in use (assuming those individuals know or discover it is in place) due to the risk of being detained by the police. For example, an LFR vehicle may deter a habitual shoplifter from their local high street or a sex offender from a crowded music concert.
3. **Better enforcement of and greater compliance with conditions applied to keep the public safe** – LFR is used by police to locate those with conditions imposed upon them through the criminal justice system (e.g. sex offenders) and check compliance. As a result, deployments may also encourage stronger compliance or lead to effective enforcement action when individuals subvert these restrictions. This could have a wide range of applications beyond sex offenders (though these cases understandably win headlines), such as an LFR van parked by a major sports stadium helping to spot those about to breach football banning orders.
4. **Public reassurance and perceptions of safety** – the very presence of LFR, in part because of the three other benefits listed above, may make the public feel safer attending events (e.g. concerts) or spending time in normal public spaces (e.g. city centres; transport hubs.)

These benefits aren't always easy to measure. Effective location of wanted people and enforcement or compliance with conditions is the most straightforward; it can be determined through outcome data – the arrests, cautions, and compliance checks which officers carry out when LFR is used. Both deterrence and public reassurance are more challenging. The latter may emerge from polling data or community sentiment, but deterrent effects are tougher to evaluate. More investment in the evidence base in these areas would likely be of considerable value.

1.3 What happens at an LFR deployment?

We're clear then about what LFR is and the public safety benefits it can purportedly offer, but what does a police deployment of the technology actually look like?

There are 3 key pre-deployment steps:

1. **A senior officer authorises LFR to be deployed in a specific area and at a specific time** (based on an operational rationale – an intelligence case – and various assessments, including Data Protection Impact Assessments.)

2. **The force crafts a bespoke 'watchlist' of wanted people for that individual deployment** – including those with arrest warrants, wanted by court, missing persons, and those (e.g. sex offenders) with conditions that officers may legally check.
3. **The force communicates publicly that a deployment will take place** – this is generally done online through force social media channels or its website.

The deployment itself then involves the following activities:

1. **Force LFR experts provide a pre-briefing to regular police officers (called 'engagement officers') who will support the deployment** – this will generally cover basic information about the LFR tool, the intelligence case, typical questions that members of the public may ask, and guidance on how to intervene when someone is flagged as wanted.
2. **At the deployment, police personnel place signs stating that LFR is being deployed (see Figure 3 below) and set up the cameras; these are usually attached to a marked police van (see Figure 4)** – an LFR system engineer will check that the cameras and systems are working properly.
3. **The LFR cameras are activated and scan faces to determine whether they are on the police watchlist** – data from scans of innocent people are immediately deleted by the system.
4. **If a wanted person is identified by the LFR algorithm, an alert is sent to an LFR operator** – this shows the live image of the face against the database image of the wanted person.
5. **If the LFR operator thinks this is a match, the alert is sent to devices held by the engagement officers** – they engage with the suspected person and check their identity.
6. **If they are the correct person, engagement officers complete some kind of enforcement action** – this might include arrests, other cautions or similar, or simply checking that people are complying with conditions or restrictions placed on them by courts.

Following the deployment:

1. **The LFR watchlist is deleted (within 24 hours)** – the underlying data (e.g. faces of wanted people) remain within the original police systems they were pulled from, but the bespoke watchlist itself is deleted and will be replaced by a new one at future deployments.
2. **Deployment outcomes are published online in force deployment records.**
3. **Individuals arrested or who faced other enforcement action will proceed through the usual criminal justice proceedings for offences they are suspected of having committed.**

Some LFR deployments will have slightly different features. For example, the Met are trialling static facial recognition cameras in Croydon (attached to lampposts and similar), which are only activated when there is a police presence nearby that could reasonably respond in time.[13] In addition, more granular accounts of the deployment process can be found in a recent report from the London Policing Ethics Panel[14] and in direct comms outputs from the Met's FR lead.[15]

[13] BBC News - Will face recognition cameras keep Croydon safer? (2025).
[14] London Policing Ethics Panel - Five Years On Reviewing the development and deployment of Live Facial Recognition by the Metropolitan Police Service(2025).
[15] Met LFR information video (2025).

Figure 3: Image showing Met Police LFR notification signs (image supplied by MPS)

Figure 4: Image showing marked Met Police LFR van (image supplied by MPS)

1.4 What are the possible outcomes when an LFR system scans a face?

But it's important to focus on that moment when an individual walks through what is called the zone of recognition – the area in which the LFR camera is capable of analysing faces – and is scanned. When this happens, there are four possible outcomes (see Figure 5 below.)

	Positive – an alert is generated	Negative – no alert is generated
True – the outcome is 'correct'	**True positive (correct alert):** a person wanted by the police is correctly identified as such by the LFR system	**True negative (correct non-alert):** a person who isn't wanted is correctly identified as such by the LFR system
False – the outcome is 'incorrect'	**False positive (incorrect alert):** a person who isn't wanted by the police is incorrectly identified as wanted by the LFR system	**False negative (incorrect non-alert):** a person wanted by the police is incorrectly identified as not wanted by the LFR system

Figure 5: Table showing possible outcomes when a police LFR system scans an individual's face

Let's imagine an LFR system that is performing perfectly. In that scenario, the system will constantly be generating both correct alerts *and* correct non-alerts. To put it in the more technical language, wanted people who walk by will be identified as wanted (true positive) and innocent people who walk by will be identified as not wanted (true negative.) In the former case, human officers ultimately confirm the alert as a 'true positive' through engaging with the targeted individual.

By contrast, if the LFR system isn't performing perfectly, mistakes can fall into the two other categories: incorrect alerts and incorrect non-alerts. Wanted people who walk by might not be identified as wanted (false negative) and even worse, innocent people who walk by might be accidentally flagged up as being wanted (false positive.)

As with the benefits of LFR, the ability to measure each of these outcomes varies when you're not in a laboratory environment. When the LFR system creates an alert, a human being will almost always intervene to verify whether the individual really is wanted (a true positive) or is actually not on the watchlist (a false positive.) By contrast, when no alert is created (true negative or false negative), there is no on-the-ground verification. As a result, police deployment records generally only specify how many of the first two types of outcomes have taken place.[16]

Of course, a range of factors determine how effective an LFR system is at achieving true positives and true negatives (and avoiding false positives and false negatives.) Some are contextual and require little explanation. LFR systems understandably fare worse late at night, in thick fog, with very dense crowds, and when using a low-resolution camera input that has been inadvertently set up somewhere where bus traffic will block the view to street level. The watchlist too, will obviously play a crucial part: low-resolution, matching passing faces against grainy watchlist images will be much harder than if higher-quality pictures were used.

However, algorithmic selection is crucial. While police forces are able to contract with other suppliers, the selection of three suppliers through a BlueLight Commercial national LFR framework means that these are likely to dominate the market.[17] Two of these (NEC Software Solutions UK Limited and Bedroq Limited) both use NEC's algorithm, while Digital Barriers Service Limited uses a product from Corsight AI. At the time of writing, almost all forces use the NEC algorithm (the Met, South Wales, and the seven forces that received Home Office-funded LFR vans), while Essex Police is the only one to work with Digital Barriers. Later on, this paper

[16] Testing in a controlled environment (e.g. a lab setting) could yield more concrete numbers for all four possible types of outcomes. The police also usually place members of the deployment team on the watchlist (a so-called 'bluelist') and instruct them to walk through the zone of recognition pre-deployment to test if the system is operational. If no alert is created (a false negative), the deployment team will know the LFR system is not functioning as expected and can carry out diagnostic checks before the public-facing operation starts.

[17] Blue Light Commercial Live Facial Recognition Framework (2025).

will discuss algorithmic selection and testing in further detail, but for this initial explanation, I'll only refer to the dominant NEC product.

At this point, it's important to discuss another technical term: the **face-match threshold setting**. This is defined by the National Physical Laboratory (NPL) as: "the comparison score value above which the compared images will be considered to match."[18] What does this mean? Well, the NEC LFR algorithm compares a person's face as they walk past the camera to the watchlist and scores that face's similarity against each image on a scale of 0 to 1. Closer to 1 denotes much more similarity, meaning there is a greater chance that the person walking by is wanted person 'X' on the watchlist, while a score nearer 0 means they aren't likely to be the same person. The face-match threshold setting then is the level at which you, the LFR operator, has decided the system is permitted to produce an alert.

So, when the NEC system is set at its default face-match threshold of 0.6, only faces with similarity scores of 0.6 or above will trigger an alert, leading to the possibility of police intervention. But this threshold setting can be moved to be more or less restrictive. South Wales and the Met both currently use a 0.64 setting, meaning that the algorithm must have effectively 'higher confidence' of a match before an alert can be triggered.[19] But the system could be pushed the other way as well – to a 0.58 setting, for example.

There is an implicit trade-off here. At higher settings, where the system is effectively being more restrictive, some wanted people may be missed (false negative), but the chance of an innocent person being falsely flagged as wanted (false positive) is reduced too. At lower settings, more alerts will be produced, such that false negatives are less common, but false positives become a clearer risk. Later in the paper, this technical element of the face-match threshold setting will be explored in more detail as it is crucial to the question of bias in LFR systems. It is a core battleground on which LFR is debated.

1.5 The three phases of LFR development

Telling the full story of the first decade of police use of LFR could take up an entire publication by itself. (Indeed, the author has covered that very subject in detail in a previous output and will return to it in a forthcoming academic chapter.[20]) This report instead presents a briefer account of the evolving use of LFR by police forces, supplemented by exclusive Leapwise analysis of published deployment statistics.

The development of police use of LFR in England and Wales can be divided into 3 distinct periods from 2015 to the present day: (1) early trials, (2) COVID and court disruption, and (3) revival and rollout.

Phase 1: early trials (June 2015 – February 2020)

LFR was first used by a police force which has, ironically, never deployed it since. In June 2015, Leicestershire Police became the first force to use LFR at the Download music festival – with citizens' faces scanned, but a watchlist that was apparently composed solely of police personnel to enable live testing to take place.[21] Additional short trials of six months or less were run by three forces from 2015 – 2018 (Humberside Police, Greater Manchester Police, and South Yorkshire Police), according to a report from the University of Cambridge.[22]

At this early stage, the Met and South Wales Police established themselves as the two pioneering forces in using what was then a reasonably new policing tactic. South Wales used LFR 13 times from May 2017 to December

[18] NPL Facial Recognition Technology In Law Enforcement Equitability Study (2023).
[19] Metropolitan Police Service LFR Deployments 2025 (2025), South Wales Police all deployments for Live Facial Recognition (2025).
[20] Policing Insight - Game changer, or dangerous tech? Policing Insight report gives you all you need to know about facial recognition (2024).
[21] Data from this deployment is challenging to locate, but some evidence here: NEC Facial Recognition UK Festival Results (2016).
[22] Minderoo Centre for Technology and Democracy a Sociotechnical Audit: Assessing Police Use Of Facial Recognition (2022)

2017 and then continued to use it regularly until January 2020.[23] The Met trialled LFR from August 2016 (that original Notting Hill Carnival deployment) until February 2019, followed by three deployments in February 2020.[24]

Notably, many of these earliest deployments appeared disappointing. For example, when South Wales Police first used LFR at the Champions League final, there were 173 true alerts and 2554 false alerts (meaning 97% of the total alerts were incorrect.)[25] The Met's generally ineffective Notting Hill Carnival LFR deployments in 2016 (1 alert total, which was incorrect) and 2017 (96 alerts, 95 of which were incorrect) have already been described earlier in the paper.

Phase 2: COVID and courts (March 2020 – February 2023)

In this next stage, the combination of legal action and a global pandemic meant LFR was, for an extended period, not deployed by any force (including the Met and South Wales). COVID's impact is the easiest to explain. With few people out on the streets, let alone attending major events or packing out city centres for work and leisure, the ability for LFR to help the police identify wanted people in public spaces was far weaker.

At the same time, long-running legal action – the R (Bridges) v Chief Constable of South Wales Police case – reached its denouement. After former councillor Ed Bridges had launched this legal challenge to the use of LFR in October 2018, opponents of the technology were initially disappointed as the High Court rejected his claims on all grounds in September 2019.[26] But the Court of Appeal delivered a different verdict in August 2020, pointing to "fundamental deficiencies" in the legal framework for LFR, issues around the police approach to data protection laws, and insufficient work to ensure LFR algorithms were free of demographic bias.[27]

The police reaction to this ruling was telling. Both the Met and South Wales did dramatically reduce their use of the technology. Between them, there were no deployments post-lockdown in 2020, none again in 2021, and then just 8 in 2022. But immediately after the Court of Appeal ruling in 2020, the Chief Constable of South Wales Police had told the press: "I am confident this is a judgement that we can work with."[28] The story of police use of LFR was far from over.

Policing moved to address the Court's specific concerns after this legal case had concluded. In 2021, the Office of the Police Chief Scientific Adviser awarded funding to the NPL to study the accuracy and equitability of LFR systems.[29] There was also the creation of authorised professional practice for LFR use by the College of Policing in 2022, setting guidance for deployments in response to some of the criticisms made by the Court. Nonetheless, there was another pause during this period, as LFR was not deployed at all from August 2022 to March 2023.

Phase 3: Revival and a new national rollout (March 2023 – Present)

In March 2023, the NPL published its report into the equitability of LFR systems, with significant findings.[30] It found that, at the default face-match threshold in the police-adopted NEC algorithm, LFR did not record statistically significant differences in false positives – i.e. innocent people incorrectly flagged as wanted by the

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[23] South Wales Police all deployments for Live Facial Recognition (2025).
[24] Metropolitan Police Service Live Facial Recognition Trials (2020); Metropolitan Police Service LFR Deployments 2020 - 2022 (2022).
[25] South Wales Police all deployments for Live Facial Recognition (2025).
[26] Judiciary of England and Wales - Press Summary 4th September 2019 The Queen (OTAO) Bridges and Chief Constable Of South Wales Police and others (2019).
[27] Judiciary of England and Wales - Judgment Approved by the court for handing down. R (Bridges) -v- CC South Wales & ors (2020); also see Ada Lovelace Institute - Facial recognition technology needs proper regulation – Court of Appeal (2020).
[28] South Wales Police - Response to the Court of Appeal judgment on the use of facial recognition technology (2020).
[29] South Wales Police - Response to the Court of Appeal judgment on the use of facial recognition technology (2020).
[30] South Wales Police - Response to the Court of Appeal judgment on the use of facial recognition technology (2020).

system – across gender, ethnicity, or gender-ethnicity combined. Forces viewed this as the clear, independent evidence needed to prove that LFR could be an effective and unbiased public safety tool.

From April 2023, the Met began ramping up its LFR deployments rapidly, and South Wales did the same a month later. With cross-party backing for the technology, both under the current government and the previous one (where the Policing Minister Chris Philp was a notably ardent supporter), political cover, operational backing, and academic evidence set the stage for a significant increase in use.

In 2024, Essex Police became the third force to invest in its own LFR capability, deploying it for the first time at the Clacton Airshow in August.[31] More recently, the Home Office funded 10 LFR vans, which were deployed to 7 forces across the country – spreading these capabilities more widely than ever before.[32] The first deployments by these newer forces are just beginning to take place, with Bedfordshire Police being one notable example.[33]

1.6 Coordination and growth

Looking across this decade, there is a clear trend of evolving practice, from equitability testing by the NPL to guidance from the College of Policing. But also evident is how central two leading forces – the Met and South Wales Police – have been in the development of this tool.

As with most operational policing tools, LFR has been managed and implemented by those working at the force level. Individual forces have chosen whether, where, and when to deploy LFR (albeit often using the expertise of South Wales Police to run trial deployments via mutual aid). Though they are often very similar in form, each force has produced its own legal mandates, policy documents, and various impact assessments.[34] On its face, this might seem like the kind of ad-hoc approach to adoption that characterises so much of the fragmented 43-force system in England and Wales.

However, that isn't the full picture. In reality, both the historically limited spread of LFR — with only the Met and South Wales maintaining standing capabilities until very recently — and the close collaboration between those two forces have resulted in a high degree of informal coordination. In interviews carried out for this paper and a previous report, it was evident to the author that these two forces have a clear understanding of what the other is doing around LFR and knowledge exchange has been very frequent. South Wales has generally taken the lead on providing mutual aid deployments, while the Met has contributed a significant amount of senior staff time (with the force's Director of Performance and Insight serving as the NPCC Lead for FR.)

Coordination has also been enhanced by the fact that this NPCC lead (interviewed for this paper) has held her role for several years, has been a regular and articulate communicator around LFR,[35] and has clearly managed to devote much time to this position alongside considerable responsibilities in-force. There are still natural limits to this – as Leapwise and the Police Foundation noted in their Fit for the Future paper, the existing part-time NPCC lead model inevitably constrains how much coordination can be done at the national level – but the centrality of these two forces has enabled a more managed development of the technology.[36] They are LFR pioneers who have played an outsized role in developing the police approach in this space.

More broadly, the 15 forces that have either trialled or fully adopted LFR fall into 4 categories (see Figures 6 and 7.)

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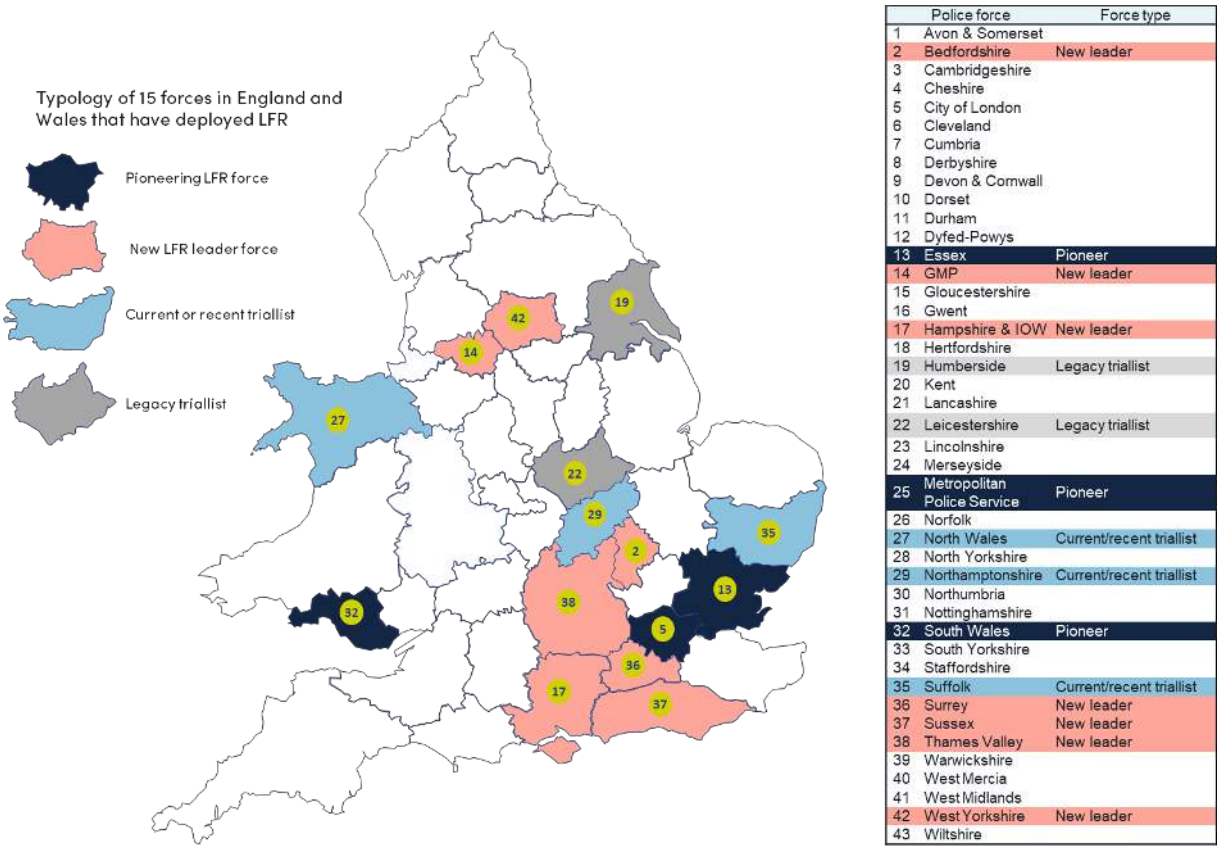
[31] Your Harlow - Essex Police purchase Live Facial Recognition technology (2024).
[32] Your Harlow - Essex Police purchase Live Facial Recognition technology (2024).
[33] Bedford Today - Live facial recognition vans in Bedford town centre today (2025).
[34] Metropolitan Police - Facial Recognition Technology (2025).
[35] See a recent Good Morning Britain appearance ahead of LFR deployment at Notting Hill Carnival: Good Morning Britain segment on LFR (2025).
[36] Metropolitan Police - Facial Recognition Technology (2025).

LFR force type	Definition	Constituent forces
Pioneers	Forces which purchased and operated their own LFR capabilities before Home Office funding was provided	• Essex Police • Metropolitan Police Service • South Wales Police (The Met and South Wales are perhaps 'super pioneers')
New leaders	Forces which now operate their own LFR capabilities because of Home Office funding – though some of these may jointly-hold capabilities with another force	• Bedfordshire Police • Greater Manchester Police • Hampshire and Isle of Wight Constabulary • Surrey Police • Sussex Police • Thames Valley Police • West Yorkshire Police
Current or recent triallists	Forces which do not operate their own LFR capabilities, but trialled LFR in the last two years through mutual aid	• Northamptonshire Police • North Wales Police • Suffolk Constabulary
Legacy triallists	Forces which do not operate their own LFR capabilities, but trialled LFR more than two years ago	• Humberside Police • Leicestershire Police

Figure 6: Typology of all 15 forces that have deployed LFR in England and Wales



	Police force	Force type
1	Avon & Somerset	
2	Bedfordshire	New leader
3	Cambridgeshire	
4	Cheshire	
5	City of London	
6	Cleveland	
7	Cumbria	
8	Derbyshire	
9	Devon & Cornwall	
10	Dorset	
11	Durham	
12	Dyfed-Powys	
13	Essex	Pioneer
14	GMP	New leader
15	Gloucestershire	
16	Gwent	
17	Hampshire & IOW	New leader
18	Hertfordshire	
19	Humberside	Legacy triallist
20	Kent	
21	Lancashire	
22	Leicestershire	Legacy triallist
23	Lincolnshire	
24	Merseyside	
25	Metropolitan Police Service	Pioneer
26	Norfolk	
27	North Wales	Current/recent triallist
28	North Yorkshire	
29	Northamptonshire	Current/recent triallist
30	Northumbria	
31	Nottinghamshire	
32	South Wales	Pioneer
33	South Yorkshire	
34	Staffordshire	
35	Suffolk	Current/recent triallist
36	Surrey	New leader
37	Sussex	New leader
38	Thames Valley	New leader
39	Warwickshire	
40	West Mercia	
41	West Midlands	
42	West Yorkshire	New leader
43	Wiltshire	

Figure 7: Map showing typology of all 15 forces that have deployed LFR in England and Wales

Perhaps the clearest takeaway from this is a simple one. The pioneering forces number relatively few (Essex, the Met, and South Wales) and, while triallists together constitute one-third of the forces listed above, their use of LFR is or was naturally very limited given they lacked standing LFR capabilities of their own. By far the largest category are those new leaders: the seven forces which have recently been awarded Home Office-funded LFR vans of their own. Almost overnight, the number of forces which operate their own (or sometimes jointly owned) LFR capability has more than trebled from 3 to 10.

Leapwise has collated all the LFR deployment data published by forces across England and Wales as of 26th September 2025. This dataset contains details regarding 613 deployments by 10 forces and is the most comprehensive, up-to-date information available today. The rapid increase in LFR use post-2023 becomes immediately apparent in this data (see Figure 8), with 76% of total deployments having taken place in 2024 and 2025 alone.

Given that the Met deploy LFR several times per week at present and new forces are gradually coming onstream, this suggests that we are almost certain to see the total number of police LFR deployments reach a new record high in 2025.

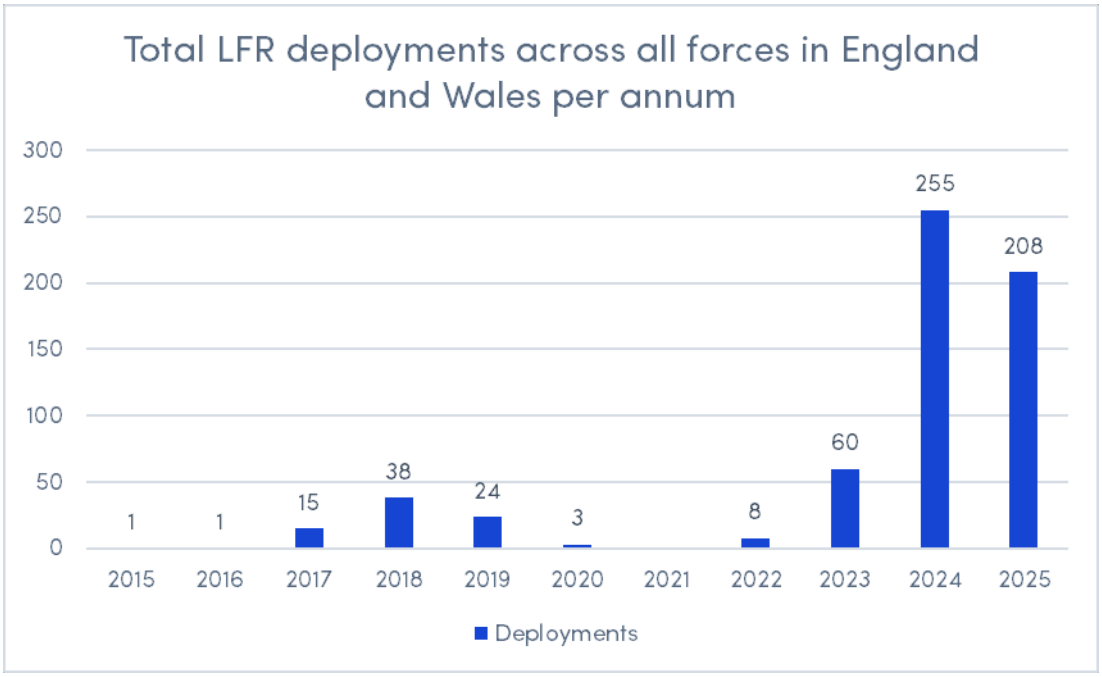


Figure 8: Leapwise analysis of police data showing total LFR deployments per annum

This same increase can be shown in other ways too. A total of 13.3 million citizens' faces have been seen by police LFR cameras across England and Wales since 2015, according to exclusive analysis by Leapwise.[37] As Figure 9 demonstrates, 10.3 million or 77% have occurred in 2024 and 2025, with year-on-year increases evident since 2022.[38]

[37] Note: this does not mean 13 million individual citizens have had their faces scanned by LFR. Some people will have passed through the camera zone of recognition multiple times, whether at the same or different deployments. This will be especially common in areas – e.g. Croydon– where LFR has been deployed repeatedly.
[38] Note: difference between combined 4.7 million and 5.7 million (10.4 million) and 10.3 million figure reflects rounding.

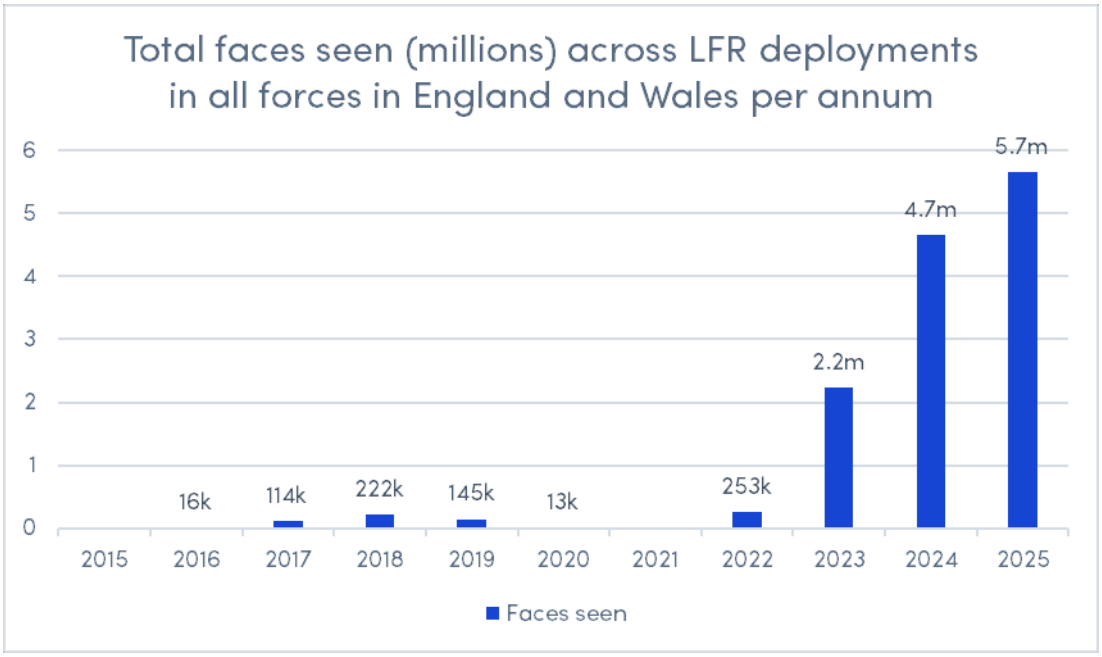


Figure 9: Leapwise analysis of police data showing total faces seen by LFR cameras per annum[39]

In the next chapter, we return to this data to examine the pattern of LFR alerts per annum, the breakdown of true vs false outcomes, and the enforcement action resulting from them. This not only demonstrates the same trend – the growth of LFR as a tool in the past two years – but also offers evidence that this increase in use has been coupled with improved accuracy and effectiveness of this policing tool.

1.7 A note on futures

With more deployments from a wider range of forces, plans for a new legal framework from the Home Office, and the potential impact that a new National Centre of Policing could have, LFR is both in a defining moment and one that is uncharacterised by some uncertainty. What *is* clear is that LFR is set to continue growing rapidly as new forces bring their own LFR capabilities onstream.

There are, of course, other elements of futures that need to be considered. Most obviously, there are alternative police use cases, such as drone-based or body-worn LFR. These have, as yet, never been deployed by the police in England and Wales. However, the latter at least is technically feasible: a trial of body-worn LFR for privately employed door staff in Southampton's business improvement district has since been made permanent.[40] For now, there is no public evidence that police forces are pursuing this approach, though the Southampton model is something that experts in policing are aware of.

In addition, shortly before this paper was published, the London Borough of Hammersmith and Fulham announced that they were working to install 20 new static LFR cameras at 10 crime hotspots in the area.[41] Despite some reports that this development was a partnership with the Met, the NPCC Lead for FR informed the author that this is not the case. The previously announced Croydon trial is the only Met-involved static LFR development at this stage. Nonetheless, such partnerships with local councils or other public safety practice could plausibly be a feature of future police practice.

Experimentation with a wider range of biometrics is also a near-certain future development. An exceptional paper from The Alan Turing Institute – 'The Future of Biometric Technology for Policing and Law Enforcement'

[39] Note: some LFR deployment data records captured in the Leapwise analysis do not include 'faces seen' statistics. This includes the Leicestershire Police use of LFR and some older South Wales Police deployments. This explains why, for example, deployments in 2015 in Figure 8 do not result in equivalent faces seen in Figure 9.
[40] Go Southampton - Live Facial Recognition (LFR) scheme
[41] Hammersmith and Fulham - New CCTV technology to help Met Police fight crime (2025).

– has detailed what some of these might look like.[42] An awareness that the current model of LFR will not be the 'end state' strongly animates those opposed to the technology. Proponents should be equally conscious of the opportunities and risks these other developments could bring. The following chapters consider these possibilities in its wider argument for a stronger legal and regulatory framework for police biometrics (including LFR.)

[42] The Alan Turing Institute - The Future of Biometric Technology for Policing and Law Enforcement (2024).

2 The Case for LFR

Proponents of LFR – including the police themselves and external experts – would argue that the case for this technology is a robust and persuasive one, especially in the context of developing best practice and an improving evidence base. This chapter offers the author's own interpretation of those arguments, presenting the view that citizens should feel reassured that LFR can deliver meaningful public safety benefits - even at a time when trust in policing has been under considerable strain.

It is worth establishing upfront that this is not a polemical account. There are entirely reasonable concerns that many hold about LFR and many of these risks may be expected to become more pronounced when future police biometric systems are deployed. Civil liberties groups and others are right to point to the potential for chilling effects, the dangers of poor practice from forces deploying this technology, and the limitations in the current legal framework. However, it's also true that much of the current debate about LFR feels stuck in the past.

The starkest failures evident in earlier uses of LFR are not replicated today – a point made at the start of this paper in relation to Notting Hill Carnival. The technology has improved, the evidence base around equitability is clearer, and attempts to create best practice have seen benefits. It can feel that critics are deliberately downplaying some of these improvements – even fighting the old war – rather than focusing on risks that remain significant. The account offered here aims to present a case for LFR that recognises the opportunities created by technology and the attendant risks that these tools can create.

2.1 LFR is a singularly effective tool for helping police to identify wanted people

It is often said that the modern policing mission is now more complex than it has ever been. With greater emphasis on more challenging types of demand – hidden harms, online offending, complex crime types like modern slavery, mental health incidents – it's hard to disagree with this argument.

And yet, some of the core activities of policing remain conceptually simple. A huge amount of time is spent on the business of locating wanted individuals who require some level of police attention. This might be a person who has committed violence on a public street or behind closed doors, a suspected offender who has breached police conditions, or a vulnerable missing person who the police are seeking for their own safety and wellbeing. The strongest argument in favour of LFR is simply that it enables this activity – finding wanted people – to be enormously improved, especially when done at scale.

In the easiest cases, the business of finding a wanted person is straightforward: the suspected criminal is located at one of a few obvious locations (work, home, school/university.) However, things aren't always so simple: address details can be out-of-date, low-priority arrests may not justify repeated dispatch of officers to search for them and, of course, wanted people may well try to avoid being found.

Where proactive efforts are less possible, the police are reliant on officers on the ground to remember a wanted person's face and identify them. That may well succeed a week after the incident if the person is walking through their local high street, but it's harder if they aren't located for a year or move to another part of the country. Officers can only recall so many wanted faces for so long. Eventually, the chance of apprehending the wanted criminal or a missing person will fall dramatically.

Deploying LFR avoids this last problem. The technology does not rely on any previous 'memory', as it can rapidly scan huge numbers of faces walking by a camera and near-instantaneously compare them to the watchlist. Time since arrest or previous knowledge of the perpetrator is not relevant. The ability to 'remember' and identify people at scale through technology (with human confirmation) is genuinely game-changing. Deployed in the right spaces where footfall is high – for example, outside a transport hub – LFR can successfully help to identify people who have long been wanted by the police.

Evidence for this can be found in the Met's LFR legal mandate.[43] Between January and July 2024, LFR helped the force identify 312 people who were later arrested. Across all those offences, the average individual was wanted

[43] Metropolitan Police - Overt Live Facial Recognition: Legal Mandate (2025).

by the Met pre-arrest for over a year (384 days). For arrests in relation to violent and weapons offences, it was 360 days and for sexual offences, it was 753 days. The same data shows that 30 people located were wanted for longer than 2 years, with one individual wanted for over 16 years (or 5,800 days.) In a January 2024 media interview, the former Policing Minister Chris Philp MP provided the author with another example of this, sharing the story of someone caught by an LFR camera who had been wanted for grievous bodily harm for nearly a decade.[44]

As well as showing how LFR can facilitate location of long-wanted people, the Met data provides some evidence that this use of technology can break organisational siloes. 57% of Met arrests following positive LFR alerts were made outside of the basic command unit responsible for finding the person. That means the person was caught in an area where the average neighbourhood patrol officer would be less likely to have recognised them.[45]

As LFR is scaled up to other forces, it becomes easier to imagine how this technology could act as a force multiplier. A person wanted by the Met for sexual assault following a London football match is caught by a Greater Manchester Police LFR deployment outside Old Trafford. Suffolk Constabulary's LFR cameras in Stowmarket successfully help local officers identify a suspected serial thief who has travelled to visit family from Hull.

In terms of raw numbers, the use of LFR has yielded significant evidence of enforcement action: a broader set of activities than arrests alone. Enforcement action will include arrests, disposals (such as cautions), and other action, including checking that those with court-imposed restrictions or violent and sexual offenders with MAPPA conditions are complying with those rules.

Leapwise analysis of deployment data shows that police have taken enforcement action (arrests, cautions and other action) 2,655 times following LFR alerts. The Met alone has taken enforcement action 2,283 times following LFR alerts (with 1,343 arrests in total). There has also been a significant amount of enforcement action by Essex Police (240) and South Wales Police (112) respectively. Looking across all forces, 2025 is now the second year running in which LFR has resulted in enforcement action over 1,000 times in a calendar year (see Figure 10.)

[44] Policing Insight - Policing Minister urges UK forces to 'dramatically and urgently' increase use of facial recognition (2024).
[45] Policing Insight - Policing Minister urges UK forces to 'dramatically and urgently' increase use of facial recognition (2024).

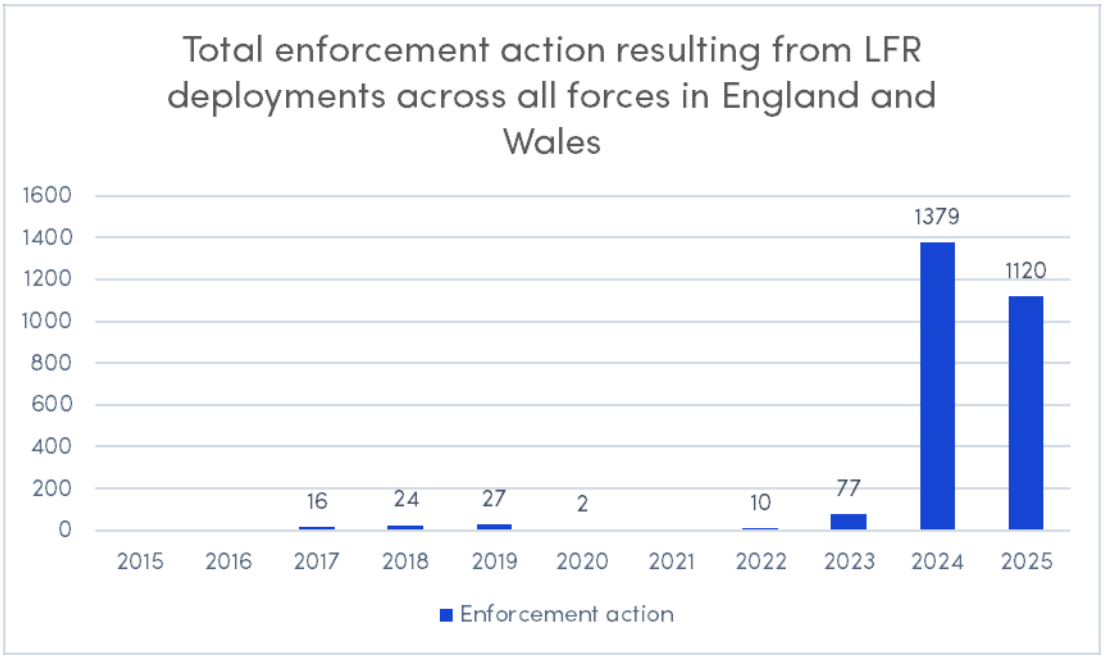


Figure 10: Leapwise analysis of police data showing enforcement actions resulting from LFR per annum

The Met has also reported that 30% of sex offenders who were stopped to ensure compliance with court orders or licence conditions ultimately proved to be in breach of those restrictions.[46] Returning to the public safety benefits described in the previous chapter, it's evident that LFR is successfully helping the police identify wanted people and improve enforcement of conditions that aim to keep the public safe.

2.2 LFR can be used by policing in an accurate and unbiased way

LFR is, therefore, able to successfully help police forces identify wanted people, whether those are missing persons or suspected criminals. But even if LFR yields encouraging outcomes of this kind, it would still be an inappropriate policing tool if it simultaneously generated many collateral false positives (i.e. innocent people wrongly flagged as wanted.) This would be even more troubling if those false positives showed evidence of demographic bias. However, the developing evidence base suggests this concern can be appropriately addressed by policing.

As the previous chapter explained, the earliest LFR deployments by South Wales Police and the Met had poor outcomes. The former force's Champions League final deployments saw 2,554 incorrect alerts against just 173 correct ones, while the Met's early Notting Hill Carnival deployments were also characterised by poor effectiveness.

Since that time, police forces have adopted new algorithms and evolved their operational practice, such that more recent LFR data bears no resemblance to this history.

Across the 148 LFR deployments by the Met so far in 2025, during which 2,539,627 faces were seen by the cameras, there were a total of 1,585 alerts. Of that number, 1,575 were correct alerts (true positives) and just 10 were incorrect. Similarly improved outcomes hold for the other two pioneering LFR forces: South Wales Police last saw a false alert in August 2019 (after which there have been 91 deployments) and Essex Police have recorded 4 false alerts ever (versus 346 true ones) across all 75 deployments they have carried out.[47] Analysis by Leapwise of published deployment data (see Figure 11) illustrates how the pattern of true and false alerts has changed dramatically over time, with recent figures from 2023 onwards showing extremely good performance.

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[46] Metropolitan Police - Overt Live Facial Recognition: Legal Mandate (2025).

[47] Notably, this uses a different algorithm supplied by an alternative provider, rather than the NEC algorithm that is operated by all other forces at present in England and Wales.

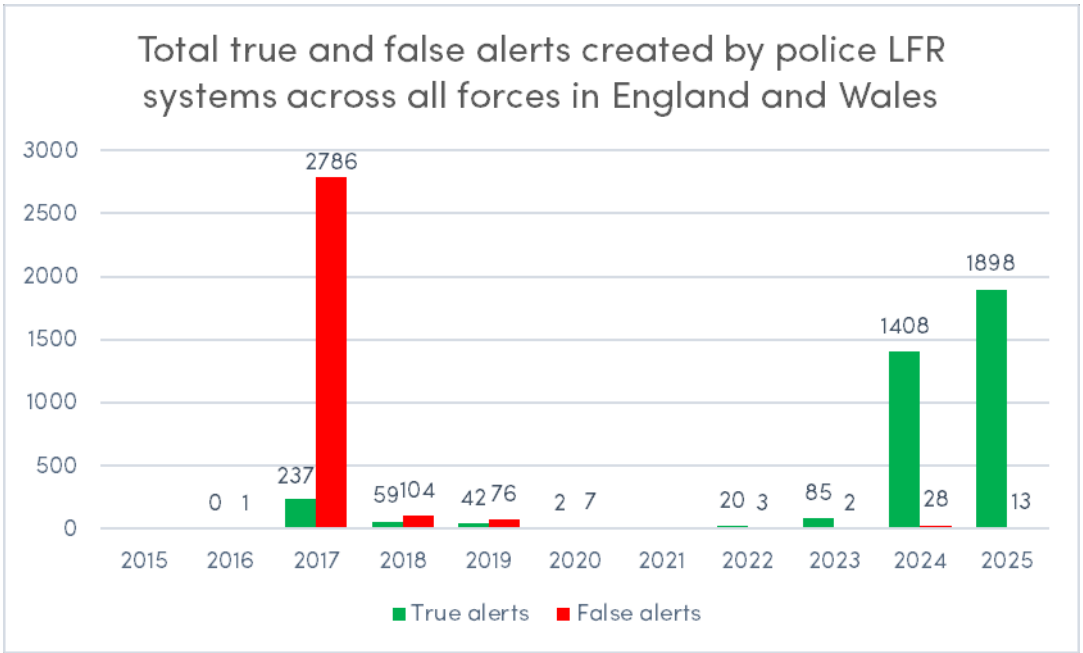

Figure 11: Leapwise analysis of police data showing total true and false alerts resulting from police LFR systems per annum

Some critics of LFR will point to older deployment data as evidence that LFR has been highly inaccurate. This is true – it certainly was in numerous earlier deployments – but this ignores the more recent data shown in Figure 11. Readers should be sceptical of arguments about LFR's accuracy which do not distinguish between these early uses and more recent deployments. Indeed, given that FR algorithms may be expected to continue improving (as technology companies compete to prove they have the best offer for the market), this may not be a persuasive argument for opponents to focus their attention on.

Similarly, arguments that the police LFR algorithms show bias across demographics – particularly in relation to ethnicity – now face a different evidence base than existed in the early days of LFR.

As noted in the previous chapter, the R (Bridges) v Chief Constable of South Wales Police case was partly successful because the Court found that the force hadn't adequately completed testing to evaluate bias. In response to this, the NPL was commissioned to carry out equitability testing of police FR algorithms. Its report, published in March 2023, appeared to function as the trigger for LFR use to ramp up again.

Why? Because in the context of LFR, the NPL found that at the default face-match threshold (0.6) in the police-adopted NEC algorithm, LFR did not record statistically significant differences in false positives across gender, ethnicity, or gender-ethnicity combined. In other words, the technology can be used – at its default settings – in a way that is unbiased, according to the NPL. If the threshold is set below this level (e.g. 0.58 or 0.56), statistically significant demographic bias does become apparent. At present, the Met and South Wales both adopt a more restrictive threshold than this (0.64.)

The publication of this study has not ended the debate in this area. One academic expert has claimed that the approach taken to measure accuracy – in which 400 volunteers passed through the zone of recognition 10 times each – is not a sufficiently large sample size to assess false positives.[48] The police do not accept that interpretation and note that the NPL, which carried out the study, is both independent of the police and a world-leading scientific organisation.[49] In the absence of further study, the best evidence available currently suggests that bias can be avoided by police LFR and the policy to adopt a more restrictive threshold could be expected to further reduce the risk.

[48] The Guardian - Expert rejects Met police claim that study backs bias-free live facial recognition use (2024).
[49] The Guardian - Expert rejects Met police claim that study backs bias-free live facial recognition use (2024).

In addition, it's worth acknowledging the two advantages that the technology has over the alternative (use of humans alone to identify wanted people.) First, evidence that human beings show demographic bias when they attempt to identify faces is well-established. The 'cross-race effect' or 'other-race effect' shows that people can better recognise faces of those of the same race vs those of other ethnicities.[50] Secondly, LFR algorithm products can be scientifically tested and compared against one other before being used at-scale; this cannot be done in the same way for all police officers tasked with identifying wanted people. The ability to measure bias in LFR algorithms provides more scope for the risk of disproportionality in false positive rates to be mitigated.

There are two other important concerns which remain outstanding. First, even though forces utilising the NEC algorithm have never used a setting below 0.6, this is not a mandatory requirement. Indeed, the NPCC Lead for FR – in an interview for a previous report published by the author – stated that dropping below 0.6 could be appropriate in extreme cases, such as before an imminent terrorist attack.[51]

In this limited scenario, that is a persuasive argument in the author's view. If there were credible evidence of an imminent terrorist attack in London, deploying LFR at Waterloo Station at the 0.58 or 0.56 level with a strictly limited watchlist of suspected terrorists' faces would be justifiable, even with the risk of demographic bias in false positives. This is an uncomfortable trade-off, but it would be an appropriate one from a public safety perspective given the risk of larger collateral harm. The rationale for this decision would need to be provided in the deployment authorisation and operational personnel involved should be briefed on the relevant risks. This also strengthens the case for clear oversight mechanisms, such that these decisions are recorded effectively and then scrutinised appropriately.

Secondly, there is no mandatory national process for carrying out equitability testing of police LFR algorithms. This is a limited risk in some ways, as every force (save for Essex) uses the NEC algorithm that has been tested using the NPL's methodology. Essex Police have, as their equality impact assessment shows, taken other steps to address concerns about bias in the Corsight algorithm they use, including an ongoing University of Cambridge evaluation and funding for an NPL evaluation using its established methodology.[52] Nonetheless, Computer Weekly have raised reasonable challenges to some of this document (especially in relation to its interpretation of NIST testing).[53] At the time of writing, the Essex Police impact assessment also included reference to the NPL findings on the 0.6 threshold setting in one area, even though this is not relevant to the force's own product.

As the next chapter argues, there is a clear case for creating a mandatory, standardised approach to equitability testing in which the NPL would use its established methodology (e.g. from March 2023) to test police LFR algorithms pre-deployment. This would provide public reassurance, clarity to policing, and enable comparisons between competing potential products that forces might use. Nonetheless, between the relative rarity of incorrect alerts – recall that there have been just 4 false positives in Essex across 75 deployments – and the encouraging results of the NPL evaluation, the case for LFR as an accurate and unbiased policing tool can now be considered the strongest it has ever been.

2.3 LFR offers limited privacy intrusion, and public support remains strong

If the topics covered in 4.1 and 4.2 appear more concretely 'answerable' – with the relevant statistics about accuracy, bias, and enforcement action providing clear foundations on which to litigate these arguments – the question of privacy intrusion is inevitably more complex.

Polling data provides some quantified insight into public approval for LFR and perceptions of intrusiveness, but the privacy impact of this policing tactic is tougher to pin down. The intrusiveness of a facial scan by an LFR system may be expected to vary enormously person-by-person, reflecting individual perceptions of policing,

[50] See: Sage Journals - The Impact of Minority-Race Status on the Cross-Race Effect: A Critical Review (2025).
[51] Policing Insight - Game changer, or dangerous tech? Policing Insight report gives you all you need to know about facial recognition (2024).
[52] Serious Crime Directorate - Equality impact assessment: Template for forces (2025).
[53] Computer Weekly - Essex Police discloses 'incoherent' facial recognition assessment (2025).

views around what constitutes an appropriate use of this tool and for what purposes, as well as deeper ideological attitudes about surveillance (especially by the state.)

One route into this topic is to return to those four possible outcomes when someone enters the LFR camera's zone of recognition. This is illustrated below by Figure 5 (reprinted from earlier in the paper.)

	Positive – an alert is generated	Negative – no alert is generated
True – the outcome is 'correct'	**True positive (correct alert):** a person wanted by the police is correctly identified as such by the LFR system	**True negative (correct non-alert):** a person who isn't wanted is correctly identified as such by the LFR system
False – the outcome is 'incorrect'	**False positive (incorrect alert):** a person who isn't wanted by the police is incorrectly identified as wanted by the LFR system	**False negative (incorrect non-alert):** a person wanted by the police is incorrectly identified as not wanted by the LFR system

Figure 5: Table showing possible outcomes when a police LFR system scans an individual's face

Considering these four scenarios, it is the two involving a wanted individual that appear to offer the least risk of meaningful privacy intrusion. In the true positive scenario, the wanted person (who is legitimately being sought by police) is flagged by the LFR scan and processed by the criminal justice system in the same manner as if they were caught by a human officer. There may be some intrusion here, but it is equivalent to that of everyday policing practice. The false negative scenario offers less intrusion than most citizens would desire from this fleeting police encounter: the wanted person is 'seen' but escapes apprehension. Neither of these cases is especially animating from a privacy perspective.

Next, there is the true negative scenario – where the innocent individual's face is scanned, but they will not face any intervention or further police attention for walking through the zone of recognition. This is enabled by the crucial fact that police LFR systems automatically delete biometric data of non-matches immediately. The intrusion is fleeting and may plausibly be something the individual is not even aware of, if they do not notice the LFR warning notice signs set up by policing. The greatest privacy intrusion may be that CCTV recordings are made during all LFR deployments, and these are only deleted after up to 31 days. Again, some may perceive this to be highly intrusive, but it is arguably not hugely dissimilar from the CCTV intrusion that citizens widely encounter on the streets of England and Wales already.

Finally, it is the false positive scenario which is the most troubling. An innocent individual has their face scanned (triggering an erroneous alert), the data is stored by the LFR system, and human verification then occurs. In the least intrusive case, human scrutiny of the individual's face may lead to the alert being overruled and so no direct police engagement takes place. However, if this does not occur and the false positive is followed through with, then police officers will stop and question the innocent person.

In a recent case which has led to legal action against the Met, a false positive reportedly saw police detain a man for 30 minutes, ask him to provide fingerprints, and then only let him go after providing a passport photo proving he was not the wanted individual.[54] In this scenario, privacy intrusion is clearly very significant – it is analogous to a stop and search resulting from a case of mistaken identity, but with biometric data seized and stored by a police technology tool too.

That false alerts are now generally rare appears to offer some useful mitigation. There were 1,401 correct LFR alerts last year and just 28 incorrect ones, suggesting that the most worrying situations (false positives) are relatively infrequent and collateral privacy intrusion is limited. However, this doesn't address what may be the more profound underlying question: how intrusive is a police facial recognition scan, even if the data is almost always deleted near-instantaneously?

[54] BBC News - 'Facial recognition tech mistook me for wanted man' (2025).

A partial answer to this might be found through polling data, which tends to show a two-thirds to one-thirds split among the public around police use of such biometrics. YouGov polling in 2023 found 57% of adults in Great Britain supported use of LFR in public spaces, with 28% opposed.[55] In 2024, the Alan Turing Institute found that most UK adults are comfortable with biometric systems that try to identify criminal suspects in crowded areas with either low diversity (61%) or high diversity (60%.)[56] Most interestingly, a recent KCL study found that just under one-third of people claim they would be likely to follow a different route to avoid a police LFR camera (29%) or wear clothes or accessories to hide their face (28%).[57] While exact scores vary by specific question, this split has broadly held over time, with majority support for systems of this type balanced by a reliable minority who remain unconvinced.

There is a notable departure from this general trend, however. Polling from the Public Attitude Survey run by the London Mayor's Office for Policing and Crime (published in January 2025) shows much higher support for LFR among Londoners – a consistent finding since it first asked such questions in 2021-22.[58] 85% of Londoners favour using LFR to identify serious/violent criminals, to locate those wanted by the courts, and to locate those who are a risk to themselves. Backing for police LFR use to identify serious or violent criminals is lower among some demographic groups – at 67% for LGBT+ Londoners and 76% for mixed ethnicity Londoners – but even these demonstrate clear majorities in favour. While the reason for the gap between London and wider national figures is uncertain, the fact that support is generally and consistently high suggests, at minimum, that the Met's LFR practices are not creating a public backlash.

Ultimately, finding a definitive answer to this question of intrusiveness may not be possible. Public support for these technologies may suggest that citizens feel the inevitable privacy intrusions are worth the potential benefits. Mitigation measures adopted by leading forces – such as auto-deletion of innocent people's data – may be expected to reassure the public, but some risks undoubtedly remain. In that case, there is a need to balance the trade-offs involved: public safety benefits vs privacy threats.

It is notable that public support for a ban on police use of FR technology is exceptionally low, with KCL finding that in 2025 just 17% favour a government ban on this technology, while 57% are opposed. However, nearly half (48%) support the Government imposing some limits. Public opinion is nuanced on specific applications as well. 47% feel permanent LFR cameras in public spaces are acceptable,[59] but 32% feel LFR should only be allowed temporarily in public.

Where does this leave advocates of police LFR? It indicates that the path to broader deployment of LFR – and police use of biometrics more generally – must be approached with care, recognising the fragile and complex state of public opinion. Privacy intrusion is an inherent consequence of surveillance measures aimed at public safety, and such risks must be managed with caution as LFR scales. This policing tool is intended, at least in part, to provide reassurance to the public, so maintaining public trust and confidence in the use of biometrics is ultimately non-negotiable.

2.4 LFR can have chilling effects and human oversight should remain a core feature

There are three further areas – briefly discussed here – which require additional attention:

- **Chilling effects** – the concern that LFR could deter citizens from exercising their democratic freedoms (such as the right to peaceful protest) because they fear surveillance and unwanted police attention is a reasonable one.[60] Using LFR in particular settings will undoubtedly come with greater risk and the

[55] YouGov - Do you support or oppose allowing police to use live facial recognition technology in public spaces? (2023).
[56] The Alan Turing Institute - The Future of Biometric Technology for Policing and Law Enforcement (2024).
[57] Kings College London - Police use of facial recognition technology in the UK (2025).
[58] Mayor of London - Learning from the MOPAC public voice surveys (2025).
[59] Police forces usually refer to these as 'fixed' LFR cameras instead (in contrast to the usual LFR deployment method whereby 'mobile' LFR cameras are attached to the top of marked police vans).
[60] This issue partly motivated the Equality and Human Rights Commission's intervention in the legal action being brought against the MPS following a false LFR alert, see: Equality and Human Rights Commission - Met Police's use of facial recognition tech must comply with human rights law, says regulator (2025).

prospect of lower public approval. For example, KCL polling found that almost all those who support LFR endorse its use at riots (92%), football matches (88%), and near embassies (87%), but even among this group of proponents, support drops dramatically for deployments at places of worship (53%) or peaceful protests (65%.)[61] Where there is intelligence of a serious threat to citizens, then LFR use may well be warranted in such cases, but the potential damage to public trust and confidence must be factored in.

There are reasons to believe that the chilling effect of LFR may be limited, especially where citizens have a good understanding of how the technology functions. Being scanned by an LFR camera does not result in someone being added to a watchlist, as the technology only functions by helping to identify people who are already wanted by police. Facial scans of innocent people do not lead to retention of any extra biometric data.

It may also be true that 'surveillance' of all types – from CCTV to videoing on smartphones in public spaces – means that police-led surveillance is simply not as 'chilling' as it may have been even a decade ago. Nonetheless, police forces should take a proportionate approach to the use of tools like LFR and the possibility of chilling effects at events like peaceful protests should be factored into any deployment decision.

- **Human oversight** – the use of a trained operator to confirm matches created by an LFR algorithm is undoubtedly sensible, partly for public reassurance that there is a 'human-in-the-loop' and partly to ensure that the system is not making obvious mistakes due to incorrect camera set-up or technical glitches. In practice, it is admittedly unclear exactly how often human oversight leads to a potential false positive generated by the LFR system being rejected (further research might well reveal that this rarely takes place.)

  Given the considerable coercive powers that police forces are entrusted with, meaningful human involvement in the LFR process is an appropriate safeguard. Even if this is rarely affecting outcomes of LFR deployments – something which again should be studied further and mitigated as necessary – it will stand policing in good stead as a norm for when more advanced biometric tools become available in the years ahead.

- **Evidence base** – building on the previous point, there is a need for a more sophisticated evidence base in relation to LFR. Significant steps have been made, ranging from the landmark NPL testing to the more routine publication of raw deployment data, which shows how LFR has successfully enabled enforcement action.

  However, there is clearly much more research that could be usefully done in relation to LFR which is far beyond the scope of this paper. For example, what evidence can be found that LFR does successfully deter criminals from attending common sites of offending? Where is LFR most likely to deliver public safety benefits and how does this compare to alternative use of resources involved (e.g. engagement officers)? How intrusive is LFR perceived as being when citizens are given the time and space to properly consider exactly how it functions? What more can we learn about public perceptions of future LFR use-cases or more advanced police biometrics?

2.5 Wider police practice around LFR has improved significantly over time

The above constitutes a concise case for police use of LFR. It is an effective and accurate policing tool which, if the right safeguards are embedded and standardised across England and Wales, should deliver public safety benefits and protect public trust and confidence.

[61] Kings College London - Police use of facial recognition technology in the UK (2025).

It's important to recognise that these arguments were less convincing in the early days of LFR. Evidence from the NPL report undoubtedly helped to strengthen the proponents' case and much more professionalised police practice has also been important. The creation of more coherent LFR policies, legal frameworks and national guidance (via College of Policing authorised professional practice) has given more confidence that this technology is being managed appropriately.

There is some external validation for this. In contrast to the earlier findings of the Court of Appeal (which criticised South Wales Police's approach to managing data protection issues), the Information Commissioner's Office recently audited the force's LFR use and gave a 'high' assurance rating.[62] The same report stated that: "processes and procedures are in place and are delivering data protection compliance."[63] It is also true that the highly transparent model of regularly publishing LFR deployment data online – often in a much more accessible way than for other policing practices – demonstrates an appropriately sensitive approach to what remains a contentious public safety tool.

As noted earlier, informal coordination at the national level has been a major enabler of this best practice. The Met and South Wales have engaged regularly, sharing knowledge as they have developed, while the latter has also helped spread knowledge of LFR through mutual aid deployments. The NPCC Lead for FR has been a much more visible public communicator and coordinator for her portfolio than the average national police lead often can be. Other mechanisms – such as the National FR Technology Board and more informal working groups – are further seeking to embed a better understanding of how to use LFR well.[64] Finally, strong interest in this technology from senior politicians (in both main parties) and the UK Chief Scientific Adviser for Policing has also pushed LFR up the policing agenda and likely spurred some further professionalisation of practice too.

And yet, police LFR faces that defining moment referenced above. After a decade of LFR use, police deployments can no longer realistically be framed as 'trials.' The public may have been more forgiving of mistakes in the early days, but they will rightly hold policing to higher standards and be less tolerant of errors in 2025 than in 2015. With three times as many forces now operating LFR capabilities, there is much less scope for national leaders to keep a tight rein on practice. There is now a risk that this burgeoning LFR use could lead to mistakes – creating lawsuits, negative press, and incorrect outcomes.

In other words, the case for LFR at once the strongest it has ever been and simultaneously at a fragile moment. As the next chapter will argue, stronger national coordination is needed to ensure that policing's improving practice persists even while LFR use is spreading more widely than ever.

2.6 A stronger legal basis for LFR would also be beneficial

Before that, the legal basis for LFR is the final topic that requires some attention in this chapter.

While the legal basis is much disputed, all parties agree that there is currently no single legal framework that governs police use of LFR. Parliament has examined LFR use, but only in a limited way so far via a debate in Westminster Hall[65] rather than the main chamber of the House of Commons.[66] The current legal framework for LFR may reasonably be described as complex – as Figure 12 below from the Met's legal mandate document demonstrates – with a reliance on common law powers, cover from more general statutory powers, and adjacent legal and regulatory requirements. However, this may be set to change significantly in the near future. The Home Office has announced that a consultation will shortly take place to "help the government to shape a new legal framework" for LFR in the months ahead.[67]

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[62] South Wales Police and Gwent Police - Data protection audit report (2025).
[63] South Wales Police and Gwent Police - Data protection audit report (2025).
[64] See: National Police Chiefs' Council - Facial Recognition Board Minutes (2025).
[65] This is a kind of secondary debating chamber where issues are discussed but are not voted upon.
[66] House of Commons - Westminster Hall debate: Police use of live facial recognition technology (2024).
[67] GOV.UK - Live Facial Recognition technology to catch high-harm offenders (2025).

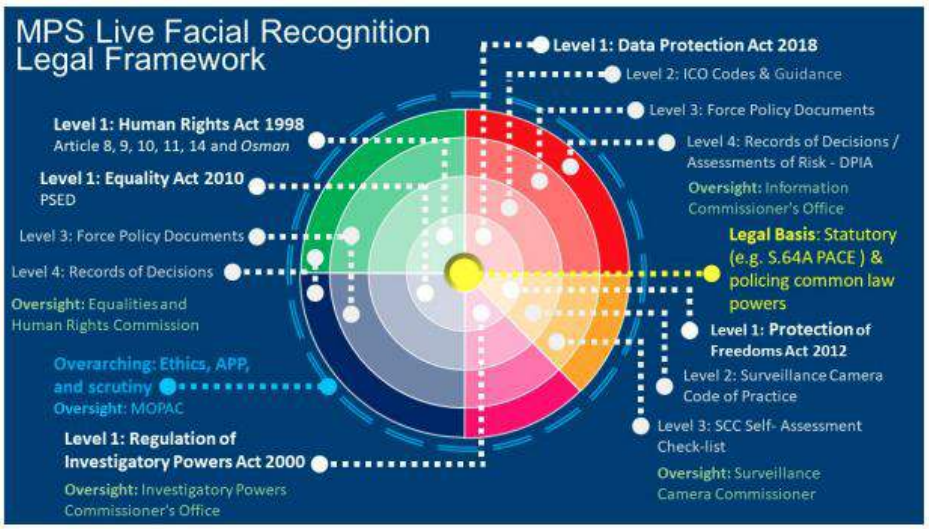

Figure 12: Image from the Met's LFR legal mandate to show the sources drawn on to provide the legal and regulatory basis for LFR[68]

Those deploying LFR in public spaces (which includes police forces and a growing number of private sector users such as supermarkets)[69] unsurprisingly argue that the current legal framework is sufficient, even if some of them recognise that it is not especially clear or cohesive. By contrast, many opponents argue that the absence of a single legal framework for LFR invalidates its use, adding that such a contentious tool deserves the sustained political debate that a legislative process would afford. Both sides also continue to take differing views on the Bridges case and what its 'correct' interpretation is.

Of course, while these two positions are what might be expected given the perceptions of LFR on each side, they are not the only views that can be held. One might strongly feel that LFR can be effective and proportionate, but still believe that the legal basis is insufficient for it to actually be used legitimately. Equally, one could believe that the legal basis is sufficient but still argue that the efficacy of the tool means it should not be deployed in public spaces.

Public polling shows that citizens generally do favour some safeguards. KCL polling shows that 75% feel police should regularly report on errors made when they use FR and 48% feel the Government should impose some limits on FR use, but public support for an outright ban is low (17% in favour vs 57% against.)[70]

Where does this leave us on the legal question? This paper does not seek to provide an analysis of the current legal basis. Instead, it looks towards what the desirable future state of affairs should be. With that in mind, a clarified legal framework – as the Home Office has promised to produce – is undoubtedly a positive step, one that could offer more certainty for all sides and ensure that the public desire for some reasonable limits on police LFR can be satisfied.

To quote the author's 2024 LFR report for Policing Insight: "For the police, a simpler legal framework is much easier to follow and comply with, leaving them less open to the kinds of legal challenge we saw in Bridges. For FR vendors, clear rules help them design their products to consistent standards and escape the uncertainty that every major business fears. For critical voices, knowing exactly what the law allows can aid efforts to challenge the police when they go wrong. And for the public, clarity opens the door to a more informed national debate about where, when and how this technology should be used."[71] This remains a sensible position for LFR proponents to take.

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[68] Metropolitan Police - Overt Live Facial Recognition: Legal Mandate (2025).
[69] Sainsbury's FR Trial Announcement (2025).
[70] Kings College London - Police use of facial recognition technology in the UK (2025).
[71] Policing Insight - Game changer, or dangerous tech? Policing Insight report gives you all you need to know about facial recognition (2024).

That same paper also featured an insightful observation from Professor Fraser Sampson (formerly the UK's Biometrics and Surveillance Camera Commissioner and now an academic and non-executive director at Facewatch.) Without a cohesive legal framework, he explained: "We end up allowing litigation to write policy. Any lawyer will tell you that litigation is probably the most expensive, least predictable, and least flexible way of deriving policy. All it does actually – whether win, lose or draw – is undermine public confidence if they constantly see police chiefs being brought into court."[72]

Before the Home Office announcement, the litigation-first approach to LFR looked set to repeat itself. In May 2024, the civil liberties group Big Brother Watch launched a crowdfunding campaign that raised over £75,000 to support legal action against the Met's use of LFR and FR use by a supermarket through the Facewatch scheme.[73] Both cases are currently moving through legal processes and there was, for a time, a danger that these would be the most powerful determinant of the future legal basis for LFR.

In other words, the Government's announcement that a consultation will be held shortly ahead of a new legal framework should be welcomed by proponents and detractors of LFR alike.[74] Given that the public do not support the kind of outright ban that opponents favour, a cohesive and clarified legal framework can provide certainty for all sides. This should, furthermore, be designed to cover much more than just LFR alone and instead offer greater clarity in relation to broader types of police biometrics (both those in use today and those that may be implemented in the future.)

[72] Policing Insight - Game changer, or dangerous tech? Policing Insight report gives you all you need to know about facial recognition (2024).
[73] Crowdfunder - STOP mass facial recognition surveillance (2025).
[74] GOV.UK - Live Facial Recognition technology to catch high-harm offenders (2025).

3 A National LFR Coordination Capability

Building on this case for LFR, this chapter presents recommendations for a more cohesive national approach to LFR. With effective coordination mechanisms, professionalised enabling functions, and local autonomy – coupled with greater legal and regulatory certainty – this model would enable LFR to be scaled-up nationally in a manner that ensures best practice and further builds public trust in this policing tool.

3.1 Current direction of travel

Three key developments are either already disrupting or are set to disrupt the status quo around police use of LFR. Two of these should be expected to deliver more central coordination of LFR, while the other will drive more local autonomy in its use. These are:

1. **Rollout of 10 LFR vans to 7 forces (localising effect)** – the announcement regarding the Home Office-funded LFR rollout references some efforts to drive shared practice, stating that the NPCC and South Wales will coordinate this expansion.[75] It will also see NPL-tested NEC algorithms become the overwhelmingly most common way of operating. Nonetheless, expanding LFR capabilities to thrice as many forces while retaining roughly the same national coordination capabilities is likely to lead to some divergent practice at the local level.

2. **A new legal framework for LFR (centralising effect)** – the revised legal framework, which the Home Office is consulting on, should provide policing with a clearer understanding of what it must do to deploy LFR appropriately. At present, each force prepares its own legal basis (though these are usually extremely similar) and practice is informed by the College APP, which is advisory rather than mandatory. A new legal framework might drive some standardisation by establishing clearer rules – though the exact scope and the timing of its introduction is uncertain.

3. **A new National Centre of Policing (centralising effect)** – the wider case for a stronger national centre of policing has been well-made by Leapwise and the Police Foundation already, with potential for greater coordination and national leadership that could unlock a range of benefits.[76] The Home Office's ongoing work on what is now termed 'NCoP' could well enhance national governance of police LFR as part of its wider effort to drive stronger coordination around police technology and enabling services.

For each of these three developments, the true effects are still uncertain. The first LFR deployments by forces with Home Office-funded capabilities only began on 19 September this year.[77] By contrast, NCoP and the new LFR legal framework are still under development. Progress on the latter in particular will likely be measured in years rather than months, given the time taken for legislation to clear Parliament.

3.2 Central coordination vs local autonomy

There is a long-running but recently revitalised debate about the structure of policing in England and Wales (evident in, for example, the Met Commissioner's call for fewer and larger forces).[78] Some leaders favour a more centralised model, arguing that a 43-force system wastes resources, prevents best practice becoming standardised, and lacks national leadership on key system-wide issues. Others favour retaining a highly localised approach, feeling that loss of local autonomy will undermine public trust in policing and may prevent innovation in pursuit of common regional or national standards.

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[75] GOV.UK - Live Facial Recognition technology to catch high-harm offenders (2025).
[76] The Police Foundation and Leapwise - FIT FOR THE FUTURE: The case for a reformed national policing landscape (2024).
[77] BBC News - Man arrested as facial recognition cameras launched (2025).
[78] The Times - Met chief calls for regional mega-forces in radical police overhaul (2025).

Views on this debate may well guide how readers approach the narrower question of what the idealised model for LFR should be. Ultimately, there is a spectrum of different visions for how LFR could be used, governed, evaluated, and enabled across England and Wales in future.

At one end – the most centralised – one could imagine a National LFR Agency, a standalone body or subdivision of a central organisation which forces could call on when they want to deploy LFR locally. With strict central coordination and a single way of operating, the sole area of local autonomy would be providing the watchlist of wanted people, proposing when and where LFR capability might be deployed, and supplying local officers to engage with those the system provides alerts for. In this model, forces would not own their own capabilities and strict legal compliance would be ensured from the centre.

The other end of this spectrum – the most localised – would see none of that coordination. Local forces would purchase, deploy, evaluate, and govern their own LFR capabilities. There would be significant variation in the algorithmic tools selected, how they are applied, the legal justifications used, and how deployment data is reported (among other things.) Those at the national level would have little oversight, but there would be considerable scope for experimentation and local innovative practice.

In truth, neither of these more extreme endpoints is plausible in our current policing model. The most localised ignores the role that national agencies, regional structures, government, and informal collaboration all play in the current policing settlement. The most centralised is near-impossible within a policing system where individual chief constables retain much local autonomy over operational practices and the largest forces inevitably hold many capabilities of their own.

Nonetheless, even if these most centralised and localised approaches are ultimately impossible, there are still tenable alternative visions for LFR. These would imply different approaches to national leadership, procurement, algorithmic testing, training, and many more core elements. Figure 13 below sets out how these elements might differ if a more centralised or more localised model were adopted.

More localised LFR model	Element	More centralised LFR model
A part-time national lead for FR with a full-time local force role	**National leadership**	A full-time national lead for police biometrics (including LFR)
Local identification and procurement of LFR technology	**Procurement**	National identification and procurement of one or a small number of standard LFR systems
Local responsibility to evaluate and test LFR systems – paid for within force budgets	**Algorithmic evaluation and testing**	A standardised, mandatory, and centrally funded LFR evaluation and testing regime (likely involving the NPL) – with required testing before any new algorithm is used plus regular re-testing
Local divergence in terms of training practices – with reliance on mutual aid, working groups, and informal upskilling	**Training**	Standardised, mandatory training programme for defined LFR deployment roles
Local divergence in terms of best practice – with reliance on guidance such as College APP	**Operational best practice**	Central identification and regular dissemination of best practice – with local divergence more tightly constrained and overseen

Force-by-force publication of deployment data – with published categories of information varying somewhat	**Reporting**	Standardised, regular national reporting of collated deployment data from all forces (though local forces would likely still publish their own data on force websites)
Local comms and public engagement as standard – with national lead being used for national media or most high-profile incidents only	**Comms and public engagement**	National development of standardised messaging around LFR – with greater proportion of media engagements handled by national lead
Local approach to funding R&D based on local interest areas – some access to central/national funding (e.g. Police STAR Fund)	**Research and development**	Centrally managed LFR R&D budget, focused on scoped research priorities and innovation areas
Local forces responsible for producing own legal bases for LFR – with significant reliance on learning from those produced by other forces	**Legal framework**	Single national legal framework for LFR (likely within wider police biometrics legislation or similar)

Figure 13: Table showing core elements of a more localised or a more centralised LFR operating model

3.3 Key criteria for an effective LFR model

For some readers, preferences between the two visions above will simply reflect underlying views around the case for more centralisation within policing in England and Wales. However, when considering the implications for LFR alone and how the benefits can be effectively scaled, the following are the key criteria for a successful model:

1. **Retention of public support for LFR and related systems** – whether localised or centralised, policing must be able to communicate why LFR is being used and for what purposes, show that risks are being mitigated appropriately, and demonstrate the evidence (including through published deployment data) that this tool is delivering key public safety benefits. Clear and consistent messaging, community engagement, and transparency will all likely help retain or indeed improve public support for LFR and other biometric systems.

2. **Clarity both about what constitutes an effective LFR system and what it means to deploy it effectively** – police forces using LFR must know what defines an accurate and effective LFR system and what best practice in terms of deployment ultimately entails. This should build on the emerging evidence base and College APP (though this has notably not been meaningfully revised since March 2022),[79] but will require well-defined technical standards and ways of operating that can be understood by forces deploying these tools for the first time.

3. **Consistent adherence to best practice standards across forces** – while clarity about best practice is important, the real challenge is to embed those high standards across forces. This might mean literally identical practices in some cases (where tools used in different forces are the same), but could equally include some local variation as long as appropriate safeguards are complied with. As noted above, this must be handled carefully. Civil liberties groups and regulators will be watching for poor practice (as they should) and resulting enforcement action against forces, negative stories, or lawsuits will likely harm public trust and confidence.

[79] College of Policing - Latest changes – live facial recognition (2023).

4. **Operational flexibility at the force level to ensure deployments are targeted effectively and responsive to local concerns** – though consistently high standards are a common requirement, local autonomy is still key. Leaders at the force level – who best understand the policing priorities of local people and what LFR use will be perceived as proportional – are almost always best-placed to make deployment decisions. Indeed, given the legal structure of our policing system, a mandated system of top-down deployments would likely be unfeasible regardless.

5. **Evidence of effective use of resources** – this general priority for all forces (given current funding pressures) has two especially relevant dimensions around LFR. First, any successful model must avoid waste and inefficient duplication across forces. Algorithmic testing is a good example of where duplication across forces would be highly inefficient, but there is scope for procurement, R&D, and other activities to be aligned sensibly too. Secondly, policing must be able to demonstrate the quantified benefit of LFR. Published data around arrests and other enforcement action is a good first step, but robust cost-benefit analyses of LFR vs other tools are now needed.

6. **Greater legal clarity (for the benefit of all sides**) – as explained earlier, a more cohesive legal framework would deliver benefits for all sides. This would mitigate the risk – which remains significant – that the legal basis for LFR will be shaped by the outcomes of individual court cases rather than a framework developed following wider public debate. Legal clarity should not entail any proscription on LFR, especially as there is little public support for such a measure.

7. **Ability to scope and adapt to future developments akin to LFR –** private sector FR applications are often far more advanced or widespread than policing's use of it, through schemes such as Facewatch. Furthermore, wider applications of LFR (such as drones and body-worn video) or other biometric systems are likely to emerge as operational possibilities in the future. Any model for governing and coordinating LFR must be sufficiently forward-looking, such that it can drive appropriate oversight and exploration of new tools that can offer public safety benefits.

3.4 A national LFR coordination capability

There are some who will argue that these criteria are most likely to be achieved in a more localised model that enables significant tailoring of LFR use to meet force-level requirements. In addition, they might add, citizens' views on the risks and benefits of this technology are nuanced and public confidence in LFR remains fragile. On that basis, an approach that is maximally responsive to citizens and communities might prove the most prudent.

These arguments have merit. However, in the author's view, a national LFR coordination capability is the most effective way to deliver on the key criteria listed above. Meaningful operational flexibility and retention of public trust is entirely possible in a structure which enables some central coordination. A more integrated capability would, furthermore, provide the most effective use of resources, embed adherence to LFR best practice, and offer greater scope to drive exploration of next-generation tools in a strategic manner.

The work done by the Met and South Wales Police in developing LFR has been essential. These two forces have built, through iteration and gradual improvement, a useful model for best practice. The priority now is to enable that success to be scaled up across more forces and avoid the risk that divergence in practice leads to a lowering of high standards.

A successful model for LFR should, then, be built around a national coordination capability. This would involve elements operating at four levels:

National control – a stronger centre (likely within the NCoP structure when live) with national ownership and responsibility for key support services, to include:

- **A full-time national leader responsible for police biometrics (including LFR)** – this individual would be responsible for managing and overseeing the national capabilities listed here, supporting local forces to embed best practice in the use of LFR and other biometrics, and acting as the national 'go-to' voice for media and other public engagements on this topic. In line with the vision sketched out by the

Police Foundation and Leapwise in an earlier paper, this individual would be supported by "a small expert staff team" (ideally drawn from the South Wales Police personnel who make up the National Biometrics Team) and receive input from NPCC committees and leading forces.[80] The lead would also chair the National FR Technology Board (or equivalent), as the current NPCC Lead for FR does.

- **National ownership of LFR procurement and options identification** – building on BlueLight Commercial's LFR framework,[81] the national centre would be responsible for identifying appropriate LFR solutions, evaluating them carefully, and negotiating agreements with suppliers to maximise value for money. It would also be responsible for scoping and procuring next-stage LFR or related biometric tools. In practice, this would involve more formal mandation than at present, with forces constrained to using only these nationally identified LFR options (though currently all forces use solutions from the BlueLight Commercial framework anyway.)

- **National algorithmic testing capability (likely in partnership with the NPL)** – as part of the procurement process, the national centre would also mandate standardised testing (around accuracy and equitability) that any proposed FR algorithm would be subject to before it is ever deployed in public. A regime of regular re-testing or evaluation of live deployment data would then provide further scrutiny and assurance. Building on its existing LFR evaluation activities, the NPL should ideally be responsible for this, with results published in a similar manner to the well-regarded FR Vendor Testing run by the US National Institute of Standards and Technology.[82]

- **National training curriculum for defined LFR roles** – the national centre would define key roles that are to be fulfilled as part of any LFR deployment (e.g. LFR operators, engagement officers, and authorising officers) and develop appropriate standardised training packages for each of them. These would vary in scope and delivery method: a standardised training webinar for engagement officers would likely suffice, but LFR operators would benefit from more sustained, in-person learning and refresher training. Additional activities, such as national conferences or working groups, could also be developed to reinforce learning and embed best practice.

National coordination with locally delivered or co-delivered activities – areas where stronger national coordination and standards-setting would be embedded through force-level activities:

- **National responsibility for developing and refreshing LFR deployment best practice rules, while retaining some meaningful local autonomy** – initially, this would mean refreshing the College of Policing's APP for LFR, but this should ultimately be a regular process to iterate and revise best practice guidance in line with the developing evidence base around LFR. Some local autonomy over how to deploy LFR should undoubtedly remain, so that forces can adapt their approach to local contexts and needs, but the national centre should be empowered by policing leaders to set some binding constraints. This might include broad requirements (e.g. mandatory training for those in key LFR roles) and some specific constraints that are considered essential to public trust (such as auto-deletion of data from individuals scanned by LFR systems who are not wanted.)

- **National collation, analysis, and publication of LFR deployment statistics to supplement local reporting –** the highly transparent approach taken by forces using LFR (in which granular data per deployment is freely published online) should undoubtedly continue. However, national aggregation of these disparate statistics would be beneficial. It would give a clearer sense of the policing-wide use of LFR, create a cohesive dataset with standardised categories to inform future research, unlock more

[80] The Police Foundation and Leapwise - FIT FOR THE FUTURE: The case for a reformed national policing landscape (2024).
[81] Blue Light Commercial Live Facial Recognition Framework (2025).
[82] NIST - Face Recognition Vendor Test (FRVT) (2025).

granular insights into effectiveness and accuracy, and underpin the development of public-facing messaging around LFR's public safety benefits.

- **National identification of R&D priorities and commissioning of research to be carried out at the local level** – the national centre should identify key R&D priorities around LFR (defined broadly to include next-gen technology, new LFR applications, impact evaluations, and public sentiment studies) and have some budget to commission projects to explore these areas. Much of the actual research activity would ultimately be delivered at force level by police personnel, academic partners, and others.

Local autonomy and responsibility – areas where a local force or forces (where there is a strong collaborated or regional model) should be empowered to make decisions:

- **Local autonomy over which (if any) LFR solutions should be deployed** – some police leaders may feel that LFR is not the right policing tool to be used in their force area. This could reflect judgements about the impact on public trust (where communities are more sceptical of LFR), financial constraints and opportunity costs, or simply the nature of the force area (e.g. dense urban localities obviously offer more scope for LFR use than more rural areas). In line with the broader principles of our current policing model, local leaders should retain the power to decide which (if any) solutions are adopted in their force area.

- **Local autonomy (within reasonable boundaries) over where LFR should be deployed, in what circumstances, and the composition of watchlists** – local leaders are best placed to make deployment decisions, factoring in force-level crime patterns, intelligence around public safety threats, and any community tensions. This doesn't mean that some specific constraints on practice – whether set by the national centre or a revised legal framework – would be inappropriate. Establishing that LFR will generally not be used in circumstances where public support is much weaker or providing overarching parameters around watchlist composition might well be sensible.[83] However, broad force-level autonomy within these boundaries is important to ensure that sufficient local operational flexibility is protected.

- **Local responsibility for community engagement activities around LFR use, both in general and in relation to specific deployments** – by extension, local force personnel are realistically the only group which could lead on relevant community engagement activities around LFR. This will likely include some engagement around specific deployments (such as through social media output or press releases), but would also extend to wider public governance and accountability spaces.

Legal certainty – all these activities should be underpinned by a clarified legal framework; this should ideally be developed as quickly as possible, but by the end of this Parliament at the latest:

- **A single legal framework around police use of biometrics (including LFR)** – a single legal framework for LFR would offer benefits for all parties, clarifying the complex legal-regulatory environment and reducing the risk of legal challenges determining the future of this technology. Assuming this is achieved through primary legislation (whether as a discrete bill or within a wider police reform package), it would also facilitate a valuable public debate about police biometrics.[84] This will be a time-consuming exercise that will likely not be repeated again for many years, so the framework should cover wider police use of biometrics rather than LFR alone and be future-proofed such that it can adapt as next-gen technologies come onstream.

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[83] Recent comments from the new Policing Minister suggest that the Government is already looking at this area, with plans to "make sure it's clear when [LFR] should be used and when it shouldn't be used." See: The Guardian - Labour plans to consult on use of live facial recognition before wider roll-out (2025).

[84] A similar type of exercise has just been carried out in Scotland: Police Scotland - Live Facial Recognition - National Conversation (2025).

Together, this model would appropriately balance the benefits of national coordination and the value of local autonomy.

Forces would retain sufficient operational flexibility around LFR deployments, but with greater adherence to an evolving evidence base around best practice. Public trust would be retained through high standards, fewer mistakes, and clearer national messaging. Efficiency would be enhanced through centralised enabling activities around procurement, training, and algorithmic testing. Coupled with a single legal framework, a more cohesive LFR model could be embedded such that current and next-gen police biometrics can be implemented effectively in a manner that retains public trust and confidence.

Conclusion

Even in the few months spent writing this paper, there have been several significant developments around LFR. The Met deployed it at the Notting Hill Carnival for the first time since 2017. A second of the 'Big 6' UK supermarkets announced a limited FR trial in two stores, building on longstanding use by the Co-Op. The London Borough of Hammersmith and Fulham shared its own plans for LFR cameras in public spaces, even if Met involvement appears to have been overstated. Most significantly, the rollout of LFR vans went ahead and a consultation around a new legal framework for LFR will open imminently.

All of this strengthens the argument that this is a defining moment for LFR. While private sector implementation of this technology is more widespread than its deployment by police forces, the activities of the latter understandably dominate the public conversation and will continue to do so. The public safety benefits, the countervailing privacy and other risks, and the legal complexities around LFR will be contested more fiercely than ever. The likely arrival of more advanced and perhaps more contentious police biometric tools – from LFR in drones or body-worn cameras to tools that focus on other biometrics – will only add to this pressure.

However, as this paper has argued, there are reasons for optimism. Policing has developed a base of good practice around LFR that could well be replicated nationally. The technology itself is proving to be accurate and concerns about bias have been addressed through independent testing. Public support for police use of this technology has remained steady over time (especially so in London, where LFR has been deployed most often), and there is little appetite for banning this tool, as some critics favour.

This is all positive, but it doesn't ignore the fact that LFR and adjacent technologies come with risks. Supporters of the police use of this technology should recognise the importance of proper safeguards. It is critical that forces adhere to best practice, both to reduce potential harms and to ensure public trust and confidence is maintained.

It's for that reason that this paper has presented not only the case for LFR, but the argument for a national LFR coordination capability – a message endorsed by the Met Commissioner Sir Mark Rowley in this report's foreword. Supported by a new single legal framework, this capability could create the infrastructure needed to ensure adherence to best practice, operational flexibility, value for money, and the most effective possible national rollout of this technology. Without this, there is a risk of forces making errors and slowing progress on what should be a clear policing success story.

Crucially, a national capability would also provide an invaluable foundation for the future. As both supporters and opponents of LFR recognise, the current tech is far from the end of the story, with new applications (LFR drones or body-worn videos) and next-gen biometric tools on the horizon. A stronger centre would be far better placed to test, develop, or regulate police use of such tools, instead of the more fragmentary force-by-force approach that often dominates in policing today. The national coordination capability could be the driving force for the development of police biometrics, enabling policing to seize the future rather than simply responding to it.

My expectation is that many readers will disagree with at least some of what's written here. As with any output of this nature, there is much more to be said. This is far from a comprehensive account of the entire story of police LFR and there are many angles that deserve to be explored in greater depth.

My hope is solely that readers who have made it to this final paragraph – whether facial recognition proponents or opponents, instinctive policing 'centralisers' or 'localisers' – will have learned more about this topic, the case for police use of LFR, and the value that a national LFR coordination capability could offer for policing in England and Wales, both today and in the future.

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