



Safer Streets: Standalone 5G and transforming UK policing

A WPI Strategy report for Vodafone UK

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 wpi-strategy.com

 nick@wpi-strategy.com

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What is 5G Standalone?

Until now, 5G has sat on existing networks and therefore relied on 4G technology. Whereas 5G Standalone (SA) is an end-to-end 5G solution, delivering more reliable connectivity, enhanced security, improved battery life and low latency (bufferless) experiences.

About Vodafone UK

Vodafone UK is a technology communications company that connects people, businesses and devices to help our customers benefit from digital innovation. Our services span mobile, fixed-line connections, home and office broadband, and the Internet of Things (IoT).

We have a strong track record as a tech pioneer, making the UK's first mobile phone call, sending the first text message, and making the UK's first live holographic call using 5G in 2018. We were the first to start carrying live 5G traffic from a site in Salford, Greater Manchester and our 4G network coverage currently reaches over 99% of the UK population.

Today, Vodafone serves more than 18 million mobile and fixed-line customers in the UK. Vodafone is the largest provider of full fibre in the UK – our superfast broadband services are now available to nearly 15 million homes across the UK.

Sustainability is also at the heart of what we do: as of 1 July 2021, 100% of the grid electricity we use in the UK is certified to be from renewable sources.

For more information about Vodafone UK, please visit: www.vodafone.co.uk and www.vodafoneandthree.uk

Executive Summary

Ensuring safer streets across the country is one of the Government's five national missions, with commitments on policing and victim-focused criminal justice reform. Neighbourhood policing is at the centre of this mission, with the Government committed to delivering an additional 13,000 additional neighbourhood officers and Police Community Support Officers (PCSOs) through police efficiencies.

Alongside police numbers is a focus on the use of technology, as well as the efficiency and productivity of the police as key parts of the police reform agenda. Like other public services, the police face a 2% productivity, efficiency and savings target this year.

There is enormous potential to improve the effectiveness, efficiency and productivity of the police through greater use of existing technology. Mobile connectivity is crucial to ensuring that the police can make use of technology effectively both inside and outside of the police station. This will enable them to deliver responsive policing more visibly in neighbourhoods and rural communities around the country.

Investment in the rollout of 5GSA could improve productivity for police officers across a variety of tasks, freeing up time for frontline responsibilities, such as emergency responses.

New economic analysis shows that, with access to a national 5GSA network, UK police forces could save a total of 11 million hours per year - equivalent to freeing up 5,400 full-time police officers for more frontline policing activities. This equates to saving around seven working days for every officer per year. That is the same as giving every officer enough time to respond to an additional Grade 1 emergency, the most serious and urgent type of police call out, each day.¹

Achieving the Government's goals on policing will require better digital connectivity across the UK. Rolling out a nationwide 5G network by 2030 – one of the Government's manifesto commitments – has the potential to boost productivity: freeing up officers' time and enabling more efficient emergency responses.

All of this will empower the police to deliver a better service to the communities they serve. There are examples of how police forces are using this technology to better support victims and reduce administrative burdens that keep them away from frontline duties.

Vodafone's proposed merger with Three UK will deliver 5GSA to every part of the country, through a self-funded £11 billion investment which will see the network rolled out nationwide.



1. Policy context

The Government's strategy for policing is based on delivering a police service that is responsive, visible and trusted by communities. The Government's manifesto included important commitments to deliver 13,000 additional neighbourhood police officers and community PCSOs, crack down on antisocial behaviour, a plan to tackle knife crime and to halve violence against women and girls by the end of this decade.²

To meet these commitments, the Home Secretary has announced a roadmap for policing reform and £500m of additional police funding next year that will sit alongside next year's multi-year spending review settlement. That programme of reform will have a focus on the use of technology, streamlining data and intelligence sharing, and freeing up police officers time to use on delivering frontline services, as well as the efficiency and productivity of the police as key parts of the police reform agenda. In addition, the Home Office, along with all government departments, has a 2% productivity, efficiency and savings target this year.³

Delivering a more efficient, productive and technology-enabled police service that is also more visible and responsive, highlights the importance of connectivity in policing. The creation of a National Centre of Policing will have an important role in ensuring that police forces can take advantage of the latest technology. Investment in delivering a national 5GSA network will directly support police forces being able to deploy that technology on the ground. 5G technology in police officers' hands can streamline time consuming tasks and enable them to be more mobile, freeing up time for them to spend in the community and responding to emergencies.



2. Neighbourhood Policing Guarantee

Increasing the number of police officers visible in the community is a central focus of the Government's plans on policing. The Neighbourhood Policing Guarantee, a Government manifesto pledge promises 13,000 additional neighbourhood police and PCSOs, explicitly funded through police efficiencies.⁴ The visibility of officers within the community fosters an important sense of trust and, where targeted, can have a positive impact on crime reduction.⁵ Yet the latest ONS figures report an absolute majority (54%) now say they never see the police on patrol.⁶

A nationwide 5GSA network directly supports the Neighbourhood Policing Guarantee. Technology enabled by this level of connectivity would enable officers to be more productive and able to redirect time saved to front-line policing in the community. It would also enable police officers to be more productive outside of the police station, allowing them to be more mobile in how they respond to crime, collect evidence and coordinate across policing teams in real-time.



3. Rural Policing & Emergency Response

Based on industry figures, the national cost of rural crime has increased 4.3% to £52.8 million in 2023.⁷ The benefits of 5GSA can be particularly impactful in rural areas where response times are higher due to the greater distances involved, limited police presence and weaker connectivity. The Government has promised to deliver a rural crime strategy to meet this challenge.

Improved connectivity can enhance the reporting of crime, enabling officers to provide a timely, joined-up response for victims. 5GSA can also help police forces to be more mobile, supporting them to be out in the community for longer, and ensuring that police services can be more responsive to local rural area needs.

Supporting victims of crime is central to the Government's mission on criminal justice. Technologies enabled by 5GSA can transform police responses to emergency situations, where every second matters. It can provide innovative ways for police officers to offer victims care, improve and speed up evidence collection and reduce the time spent on administrative tasks and communication between the force. Time saved can be spent on supporting victims of crime directly, providing a more compassionate policing experience.



4. The Transformation Opportunity

This new research reveals impressive results when quantifying the benefits of standalone 5G for policing.

We find that:



A national standalone 5G network could help save a police officer an average of **64 hours per year**. **That equates to saving every officer around seven working days every year**, by making tasks such as communication, case administration and frontline policing more time efficient. **That is the same as saving 17 minutes per officer per day**, or giving officers enough time to respond to **an additional Grade 1 emergency each day**.⁸



At a national scale, this could result in a **total saving of 11 million hours per year** for the UK police service – effectively freeing up the equivalent of **5,400 full-time officers for frontline duties**.



These time savings would be comparable to freeing up an equivalent of **eight additional officers per 100,000 people**, freeing up the equivalent hours of 44 full-time officers for a city like Manchester, or 13 for smaller towns like Slough.



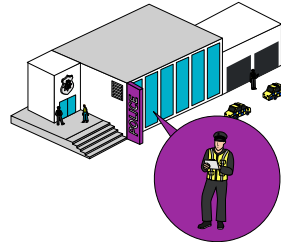
Stronger Connections: Safer Streets

In the courtroom...



Remote live streaming for police testimonies can enhance productivity by allowing officers to testify from police stations rather than travelling to courtrooms, reducing unnecessary waiting times associated with court duties – something Vodafone is working on with the West Midlands Police. With nationwide 5GSA, live streaming could be rolled out more effectively to all UK police stations.

Inside the station...



5G could enable police officers to securely and quickly upload, access and share information on-the-go – reducing time spent on administrative tasks and freeing them to focus on primary duties. Partnering with IT support provider Centrality, Vodafone is helping public sector organisations to automate and optimise workflows with Microsoft365 solutions.

Police vehicles...



The Vodafone Smart Hub could help provide police vehicles with connectivity in remote areas, enabling officers to quickly and securely share critical information with HQ in real-time.



In-car analytics powered by 5GSA could accelerate the police service's EV transition by identifying vehicles ready for replacement. These analytics can also provide police fleet operators with real-time data for smarter, more efficient vehicle management.



Supported by 5GSA, SIM cards enabled by the Internet of Things (IoT) in police cars could help them monitor location and vehicle diagnostics in real-time – predicting and preventing operational issues to keep officers – and their cars – ready to respond swiftly.

On the scene...

5G-enabled technology can help the police securely capture and transmit witness and victim statements directly from the scene – providing immediate access to evidence for case reviews and reducing the need for repeated testimonies.



5. How Vodafone's 5G Technology is Enhancing Connectivity and Capabilities Across the UK

These figures provide a valuable insight into the potential of 5G for transforming policing activity in the UK both today and in the future. Some police forces are already leveraging 5G-enabled technology, in partnership with Vodafone, to support their policing teams and realise significant benefits.

The roll-out of a national 5GSA network will both solve the problem of not spots, where mobile police teams suffer weak connectivity, and make deploying next-generation technology a reality across the country.

West Midlands Police - mobile connected officers and evidence gathering

Vodafone currently has a partnership with West Midlands Police providing them data connectivity for their mobility devices.

By enabling officers to submit data in real time, this helps West Midlands Police to drive further efficiencies and to deliver a better service to the public. Examples of everyday scenarios include:

- Officers taking a witness statement directly on their phone or laptop and asking the victim to e-sign it once finished.
- Enabling officers to testify in court remotely and securely, saving them having to unnecessarily travel to court.
- Sharing pictures of the crime scene with the control room in real-time and holding it for evidential use later in the investigation or at court.

These uses of 5GSA deliver benefits for both the police force and victims. The ability to give evidence remotely via 5GSA can significantly streamline the court process, eliminating the need for time-consuming travel between courtrooms.

This same benefit extends to victims, allowing them to testify from a location where they feel safer and more comfortable. This mitigates the emotional distress many victims experience when testifying in open court.

Greater Manchester Police (GMP) - faster responses to incidents⁹

After initially adopting 5G during the COVID-19 pandemic, Greater Manchester Police (GMP) was able to manage resources more efficiently through real-time messaging and better information sharing across policing departments.

The adoption of 5G has resulted in:

- Enhanced real-time monitoring of staff safety status during a crisis
- 85% reduction in time spent sourcing staff transportation and equipment during major incidents
- Improved coordination both internally and with public and private sector partners

5G is enabling advanced communication and information sharing between departments and greater innovation through tactical deployment of mobile cameras during incidents that can stream high-definition video. 5GSA will enable even more advanced deployment of camera drones to support police officers and live streaming from police vehicles on call.

A 5GSA-powered, future police service

These case studies demonstrate how adoption of advanced 5G networks and technology can be transformative for policing efficiency and productivity.

The benefits of national 5GSA network would support the deployment of technology within police forces ensuring that these benefits could be realised across the whole of the UK.

That future could involve:

- **Faster response times for victims** – police forces could provide greater use of video responses to emergencies, especially in situations like domestic violence where the physical attendance of officers might dissuade victims from getting in contact with the police or potentially put them in greater danger.
- **Greater collaboration between police teams** – a more advanced network would enable officers to collaborate with different teams in real-time whilst at crime scenes. For instance, enabling them to collect and securely share evidence.
- **Enabling more responsive policing** – the power of a national 5GSA network would enable live streaming from police vehicles, real-time coordination between mobile police units and the use of more sophisticated tools like police drones to respond and track crime.

These examples show how adoption of 5GSA-enabled technology could significantly improve police productivity and efficiency but also result in enhanced victim support and more visible policing.



Conclusion

Delivering the Government's Safer Streets mission and its planned programme of police reform depends on improving productivity throughout the police service, getting more officers out of the police station, into the community and responding to emergencies. Our research shows that a national 5GSA network could help save individual police officers around seven working days per year each, through streamlining and optimising communication and administrative tasks across the police force.

The self-funded £11 billion investment, part of the proposed merger, Vodafone UK and Three UK, would see 5GSA rolled out nationwide. It will also make it easier for police forces to deliver key parts of the Government's reform agenda. That increase in connectivity will revolutionise the day-to-day functioning of the police service, freeing up time for officers to spend on the frontlines, preventing crime and responding to emergencies.



Methodology

- **Analysis of Police Officer Time Allocation:** Our analysis utilised ONS data to examine how police officers spend their time throughout a typical workday. This breakdown was categorised by task type to identify areas of policing activity which can benefit further from full 5G connectivity, especially in more remote areas and for tasks that can be completed more easily when on the move. These tasks are highlighted below, with tasks that are unlikely to benefit are greyed out.

Activity	Time spent (minutes, Mean avg - ONS)	5% time saving assumption	Vodafone Business case studies
Records management	64.1	3.205	5G communications
Meetings and events	17.9	-	-
Communication	39.1	2.0	Blackberry AtHoc Crisis Communications messaging, 5G-based calling for rural areas
Staff management	9.7	-	-
Project management	11.5	0.6	5G communications
Training and research	19.7	-	-
Other general administration	4.6	0.2	Remote access to documentation
Data processing, data analysis, data science	4.0	0.2	Real-time data processing, witness statements, crime scene photo uploads
Other public service duties	3.3	-	-
Travelling as part of paid work	4.7	-	-
Other work activities	67.1	-	-
Student management	20.2	-	-
Policing activity	212.3	10.6	City Vision and Smart Hub for monitoring/CCTV/live streaming, Body Vision for connected bodycams, GPS
Other policing	45.4	-	-
Offender management	3.3	-	-
Court duties	2.3	0.1	Live Link for secure closed-link video
TOTAL MINUTES SAVED PER DAY	529.2	16.9	

- **5G Impact Assumption:** As an illustrative example, we modelled the impact of a national 5GSA network, assuming a 5% reduction in time spent on certain tasks. 5% was selected as the middle-bound estimate from consulting existing literature and an empirical review of existing studies across the occupations and sectors that could stand to benefit most from 5GSA. This was used to calculate the total minutes saved per officer per day.
- **Extrapolation to Full-Time Equivalent (FTE) Officers:** Using the latest police force data, we extrapolated these time savings based on an average of 228 days worked per year, to give represent the number of the time saved as an equivalent total number of FTE police officers.
- **Regional Analysis:** These total hours saved were subsequently broken down into regional outputs by using the latest Home Office data on the number of police officers per territorial force in the UK.

Endnotes

- 1 The analysis found the savings equate to 17 minutes every day for each police officer. To put this in context, the target response times for Metropolitan Police and Greater Manchester Police Grade 1 emergencies is 15 mins. Grade 1 emergencies are those defined as those with an immediate urgency and encompass situations where there is an immediate threat to life or where a serious crime has just occurred.
- 2 2024, Labour Party General Election Manifesto, <https://labour.org.uk/wp-content/uploads/2024/06/Change-Labour-Party-Manifesto-2024-large-print.pdf>
- 3 2024, HMT Budget, p2, ibid
- 4 2024, Labour Party General Election Manifesto, p129
- 5 2021, College of Policing, The effectiveness of visible police patrol. <https://www.college.police.uk/research/what-works-policing-reduce-crime/visible-police-patrol>
- 6 2024, ONS - Crime in England and Wales: Annual supplementary tables, Table S10, <https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/datasets/crimeinenglandandwalesannualsupplementarytables >
- 7 2024, NFU Mutual, 2024 Rural Crime Report <https://www.nfumutual.co.uk/farming/rural-crime/>
- 8 Both the Metropolitan and Greater Manchester Police Forces have a 15-minute response targets for Grade 1 incidents defined as urgent emergencies. Situations that might include responding to a vulnerable person at risk of serious/life threatening harm
- 9 Delivered through an expanded partnership between Vodafone and Blackberry, <https://blogs.blackberry.com/en/2020/07/vodafone-chooses-blackberry-athoc-for-secure-crisis-communications-offering>



WPI Strategy Limited

1st Floor,
5-6 St Matthew Street,
London,
SW1P 2JT

@WPI_Strategy

wpi-strategy.com

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