

Accelerating digital Innovation in Emergency Services



Together we can
vodafone
business

Next steps on the digital journey

The Police, Fire & Rescue and Ambulance services are on the frontline of protecting and safeguarding us all. In line with UK Government policy, blue light emergency services are tasked with digitally transforming their organisations. New ways of working are improving service delivery, increasing efficiency and reducing response times, whilst ensuring the safety of people and places.

The impact of COVID-19 is likely to have further accelerated the uptake of digital technologies in emergency services. Now, with so much pressure on budgets and resources, organisations urgently need even more digital tools and easy access to transformational technologies. Vodafone is at the forefront of making this happen with innovative technology and 5G connectivity.



Transforming rural communication

5G Rural Dorset's plans to enable drones with 5G, will help emergency responders operating in challenging environments to reach people in trouble much faster.

Find out more



This document explains how

our vision for emergency services is helping to empower change.




Contents

In this digital brochure you will find:

- > **Realising the ambition of emergency services**
Delivering the digital vision with innovative communications technology.
- > **Making change happen – right now**
Addressing the critical challenges of emergency services leaders.
- > **Improving the citizen experience**
Supporting a faster, more efficient response with digital connectivity.
- > **Empowering frontline emergency services**
Providing the right digital tools for a rapid response.
- > **Making the everyday more efficient**
Doing more, doing it faster, doing it for less.
- > **Connectivity for a unified emergency response**
Real-time visibility when disruptive events happen.
- > **Why Vodafone for emergency services?**
Sharing the same vision, values and purpose.



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-  Click (+) to open a new page with more in-depth information
-  Click (x) to return to the page you were on
-  Click (Home icon) to take you back to this page



Realising the digital ambition of emergency services

The UK's blue light emergency services have well-established digital strategies. Centralised command & control and mobile technologies have supported ways of working in this sector for many years. Now, this digitisation is being ramped up as new digital technologies and communications capabilities come in to play.

An ambitious technology vision embraces social media channels and smartphone apps that open up new ways for citizens to access emergency services and advice. Connected computer systems link frontline employees to centralised ops and support teams. And they're delivering always-on access to information, such as patient histories and minute-by-minute route information. All this enables a faster, more targeted response, for less cost than ever before.

This is a far-reaching digital transformation that will ensure the UK's emergency services are fit for the future.

Protecting the vulnerable

UK police forces are implementing our exclusive TecSOS mobile technology, giving victims of domestic violence an immediate connection to the police at the touch of a button.

Find out more



Making change happen – right now

At Vodafone, our track record in emergency services rests on a deep understanding of the challenges today's blue light emergency services leaders face, day in, day out.

How do you maintain and improve your legacy systems? What's the best tech for keeping your frontline teams productive and safe? How do you track your critical assets, adopt paperless ways of working and achieve a painless cloud migration? And how do you connect systems to improve the information gaps standing in the way of workforce efficiency, speed of response and citizen satisfaction?

We're already working with the Government; helping Police, Fire & Rescue and Ambulance services across the UK to accelerate their adoption of digital tools and discover the art of the possible with 5G to ensure they become even smarter, faster, better.



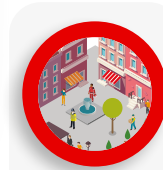
Around two thirds of the UK's emergency services use our products and solutions.



Take a look at these interactive visuals to see where we're already making change happen

By enabling communications technology, we are:

- Improving the citizen experience
- Empowering frontline emergency services
- Making the everyday more efficient
- Providing connectivity for a unified emergency response



With workforce mobility



With operational collaboration



With the right infrastructure



Improving the citizen experience

Speed of response colours the public's confidence in their local Police, Fire & Rescue and Ambulance services. It is perception based on results. Citizens are also used to fast online access to almost everything and this now includes their interaction with the emergency services:

- We're working with partners to create bespoke apps that can help Community First Responders connect with their office-based control centres easily and securely over our 4G network when they attend medical emergencies. With responsive citizen service a priority, they can share critical information about the incident on arrival and request additional support from the emergency services.
- Improved mobile working is enabling police officers to spend more time in the community to instil public confidence and speeding up sharing of evidence with colleagues.
- We are using disruptive technology to make the 101 police non-emergency call service even more citizen-focused by adding social media interaction. We provide this free to users.
- During the coronavirus pandemic, we enabled all our mobile customers, whatever their payment plan, to access certain NHS websites – like www.nhs.uk and www.111.nhs.uk – without using any of their data allowance.

Coastal connections

Smart Sound Connect built on a Vodafone 5G mobile private network will enable multiple use cases, including connected buoys and environmental monitoring in Plymouth Sound.



Connecting people at risk

The Vodafone Foundation's Bright Sky app (developed with the Thames Valley Partnership and Hestia) is connecting people at risk from domestic violence and abuse with advice, information and local support services.



The tools we use for improving the citizen experience

Giving you eyes where you need them most – City Vision surveillance

Our Internet of Things portable Vodafone City Vision solution enables footage to be captured around emergency services properties and public places, day and night, in all weather conditions. Its portability means that it can be used in almost any location.

Find out more



Enabling innovative approaches to emergency services – 5G

Paramedics sharing data with colleagues back at the hospital in real time, drone-assisted crowd control and area searches, fire crews live-streaming an incident back to operational command and police officers with full-shift bodyworn cameras.

Find out more



Providing citizens with assistance at the press of a button – TecSOS

Ensure that vulnerable citizens can get quickly through to local police services via a TecSOS-enabled mobile device and SIM card – support is provided 24/7.

Find out more



Connecting people at risk of domestic abuse – Bright Sky app

A free app connects people at risk, or concerned about someone they know, with advice, information and local support services. Incidents of domestic abuse can be logged without any content being saved on the device itself, including recorded incidents.

Find out more





Empowering frontline emergency services

Mobility solutions and modern network connectivity are changing the game for emergency services teams across the UK. Instant access to alerts and critical information helps them do their jobs faster, while innovative IoT solutions keep them safer.

At Vodafone we are empowering blue light emergency services personnel by:

- Increasing the productivity and efficiency of frontline workers and support staff through improved network coverage with 4G – and now 5G in some areas.
- Improving remote access to information, documents and central databases while on the way to or attending an incident through smartphone applications.
- Connecting bodyworn cameras on the frontline with back-end evidence management tools, which can help to gather vital evidence, reduce complaints against police, increase early guilty pleas and free up officers for more time on patrol.
- Enabling ambulance crews to stream vital signs data and transmit images from portable CT scanners to waiting hospital teams using in-vehicle WiFi technology.



Partnering for good:
Emergency One keeping fire engines on the road with our IoT network.



The tools we use for empowering frontline services

Helping to protect citizens and frontline teams – Bodyworn Vision

We're helping to safeguard frontline workers, including police officers, fire crews and paramedics, by live streaming events as they unfold, with the ability to play back crucial moments in high definition.

Find out more



Relaying vehicle diagnostic data directly from fire engines – IoT enabled SIM's

Working with vehicle manufacturer Emergency One, we're connecting vehicle data with maintenance teams to monitor fire engine performance and keep vehicles on the road.

Find out more



Protection against unauthorised drones – Vodafone Drone Defence

A secure, robust cloud-based data analytics service focused on protecting locations, properties and events from security threats posed by unauthorised drones flying over and around them.

Find out more



Making the everyday more efficient

Falling budgets. Reduced headcounts. Tasked with doing more, for less, the UK's emergency services are using digital tools to improve operational efficiency and streamline back office support.

There's growing use of 5G, cloud and data, as well as computers, laptops, tablets and mobiles all talking to each other. And all making the everyday more efficient.

- Electronic witness statements can be taken, crime reports updated and photos of known offenders shared, all while in the field using our mobile solutions.
- Predictive fire engine maintenance empowered by our IoT-enabled SIMs connected to our network, helps to cut costs and keep vehicles on the road in partnership with leading fire, rescue and emergency vehicle and equipment manufacturer Emergency One.
- Secure video links mean that police officers no longer spend time travelling to and from court, often waiting hours to give evidence. Instead, they can testify via live streaming from the police station.
- GPS and geo location apps help to improve resource management, maximise availability and reduce incident response times.



Customer story:

West Midlands Police use digital technology to boost efficiency.



The tools we use for making the everyday more efficient

Tapping into the power of cloud – Microsoft Professional and Managed Services

Our Microsoft Professional and Managed Services in partnership with Centrality give emergency services organisations a range of expert services to ensure Microsoft 365, Teams and Azure are efficiently implemented and effectively managed.

Find out more



Speeding up justice by allowing video evidence from the station – Live Link

Enabling court evidence to be given through secure video conferencing. Police officers no longer spend time commuting unnecessarily to court, while vulnerable witnesses can provide evidence in a safe environment.

Find out more



Making electric vehicle (EV) fleets a reality – Telematics

Alongside our automotive telematics for managing vehicle fleets, our Electric Vehicle Suitability Assessment (EVSA) can help emergency services organisations transition to electric vehicles by providing data analysis on which vehicles can be replaced with EVs.

Find out more



Relaying vehicle diagnostic data directly from fire engines – IoT enabled SIM's

Working with vehicle manufacturer Emergency One, we're connecting vehicle data with maintenance teams to monitor fire engine performance and keep vehicles on the road.

Find out more



Connectivity for a unified emergency response

Joined-up delivery of emergency services is a priority when major accidents or disruptive events happen. As is visibility of events on-the-ground and uninterrupted communication between frontline teams and operational control.

Emergency services organisations are adopting cloud-first policies giving them access to the digital solutions and services they need to make this happen. At Vodafone, our strategic partnership with IBM brings together our leadership in IoT, 5G and edge computing with IBM's multi-cloud industry expertise and professional services capabilities.

We're investing in the complete modernisation of our network, rolling out 5G and expanding core and fixed capabilities to help keep our customers connected, whatever the world throws at them.

"We chose the secure and reliable BlackBerry AtHoc messaging platform to allow us to share and receive real time information across our business and police operations. BlackBerry AtHoc will help us rapidly respond to internal operational issues and ensure accurate information is shared across multiple police departments and personnel using both analogue and digital channels."

Darren Spurgeon, Police Inspector, Greater Manchester Police

We enable:

- Real time crisis communication management with an easy-to-use and secure BlackBerry mass communication system.
- Deployment of tactical mobile cameras during an incident, along with streaming high-definition output.
- Live streaming using Smart Hub from police vehicles gives HQ a better understanding of incidents, helping guide response decisions during evolving situations with Smart Hub.



Customer story: Combined Services

Piloting use cases for a mass communication solution.



The tools we use for a unified emergency response

Keeping communication lines open – BlackBerry AtHoc Crisis Communication System

Mass communication is essential during a time of crisis or disruption to keep your employees and their work environment safe, secure and connected.

Find out more



Creating control of your highly resilient network, securing your data and delivering cost savings – SD-WAN

The ability to easily and cost effectively optimise your network capability and performance to underpin business applications, including collaboration, video and voice is a great asset. SD-WAN enables security policies to be implemented and optimised for all sites with management via a central portal. Find out how we're making this possible across the UK.

Find out more



Turning emergency vehicles into mobile WiFi hotspots – Vodafone Smart Hub

Reliable connectivity from emergency services vehicles enables live streaming from an incident to provide HQ with a better understanding of events, helping guide response decisions during evolving situations.

Find out more





Why Vodafone for Emergency Services

At Vodafone, we are committed to helping the UK's blue light emergency services organisations accelerate their digital transformation. As the huge value of technology and connectivity continues to be recognised at every level of the emergency services, we're investing in the capabilities to speed this transformation.

Yet we recognise that budgets are still a challenge. The key is to truly innovate through technology. Using it for improved and more cost-efficient collaboration. To enable predictive maintenance. To better manage resources, including traffic routing to incidents and feet on the ground. And to integrate records and data capture across systems and devices for a superior citizen experience.

Vodafone is a purpose-led business. Just like the emergency services. That's why we've made a series of commitments that include prioritising mission critical communications; providing network capacity and services for critical government functions, especially emergency calls; and improving the delivery of information to the public.

We are a British company, sharing the belief of the UK's emergency services that improving the lives of everyone will result in a brighter future for us all.



Looking to accelerate your digital transformation?

Get in touch to discover how we're innovating for faster response times, improved connectivity and a more rewarding employee experience. Contact your **Vodafone Account Manager** or call **0808 0998877**







Monitoring properties and public spaces

City Vision



City Vision?

People want to feel safe and to live and work in a great place. Unfortunately, not everyone feels the same. Property damage and theft, along with anti-social behaviour on our streets, are familiar issues across the UK. Better monitoring can act as both a deterrent and a means for prosecution.

What's the solution?

City Vision solution discretely monitors properties and public spaces with high-resolution footage, whatever the conditions. This adds a layer of intelligence to existing cameras — turning them into smart, event triggered devices removing the need for continuous human monitoring. Emergency services teams can both record and live stream footage over our network, as well as view and analyse it remotely with the help of our powerful application.

What's the outcome?

Visibility in and around properties or public spaces 24/7, with live surveillance, keeps property, places and people safe.





Enabling transformative innovation in emergency service's communication

5G

Why 5G?

In the community. On the move. At remote locations. Emergency services teams are out on the road, maintaining a visible presence day in, day out. But slow data transfer, buffering and loss of service are hampering the ability to receive and send documents, records and images, or even live stream an ongoing incident back to control rooms or direct to other users. This is frustrating and time consuming for everyone concerned. Gradually being rolled out across the UK, our 5G network will transform this area by area.



What's the solution?

5G mobile networking is the successor to 4G – it's much faster than previous technologies, but it's not only about speed. It supports high capacity and highly reliable mobile connections, which have the potential to bring a new era of connectivity for the emergency services.

Many more devices than ever before can connect in the same area without loss of service. For example, paramedics could share images of a trauma with specialists back in A&E to improve the triage process on arrival at hospital, while 5G-connected wearables would enable firefighters to detect exposure to smoke in real time.

What's the outcome?

Downloading critical documents, such as patient records, will take just seconds. Always-on, high quality video could support wider adoption of body-worn technology. Images at an incident can be shared and discussed in real time between disparate teams. And, as the emergency services sector continues to introduce Internet of Things (IoT) applications, 5G's capability and low latency will support the collection of massive amounts of data from IoT apps.

5G is also enabling innovative approaches to emergency services delivery. More and more blue light organisations around the world are discovering the art of the possible with 5G, including the use of high-tech drones by New Zealand Police to provide an ultra-high definition view of a scene and for crowd control.





Providing vulnerable citizens with assistance at the press of a button

TecSOS

Why TecSOS?

When a vulnerable person needs help, the ability to contact the police at the press of a button is invaluable. A TecSOS-enabled mobile device makes that possible. Our TecSOS solution is only sold to UK police forces in this context and is a not-for-profit offer from the Vodafone Foundation.

What's the solution?

TecSOS-enabled mobile devices come with a SIM card and connection arrangements specially developed to speed alerts through to the police. When the police believe someone is vulnerable, they can give that person a TecSOS-enabled device. We work with a partner to provide an additional tracking and location app that aids a fast response. The solution is supported by independent charity Thames Valley Partnership that works with us to provide front-line sales, installation and training support, as well as out-of-hours support.



What's the outcome?

TecSOS ensures that vulnerable citizens can get quickly through to local police services 24/7. Our solution offers:

- An enhanced level of confidence, reassurance and protection for vulnerable individuals virtually anywhere in the UK.
- Faster time to provide an emergency response.
- Enhanced quality of response by giving the relevant police force the information needed to take appropriate action.
- 24/7 support. During business hours, it is provided by our TecSOS specialist Customer Services Team. Out-of-hours support is provided by Thames Valley Partnership, who also have access to our out-of-hours support if needed.
- TecSOS was credited with saving at least seven lives over an eight-month period in an independent evaluation of one police force.





Connecting people at risk of domestic abuse

Bright Sky app

Why the Bright Sky app?

1 in 3 people in the UK would not know how to help a friend or family member who was a victim of domestic abuse, according to a survey by leading domestic abuse charity Hestia.¹ We believe this alone highlights the need for Bright Sky, the first smartphone app to provide a UK-wide directory of specialist domestic abuse support services.

What's the solution?

Vodafone Foundation in partnership with Hestia, launched Bright Sky – a free and unique mobile app to help people affected by domestic abuse. It enables users to locate their nearest support centre by searching their area, postcode or current location. This connects people at risk, or concerned about someone they know, with advice, information and local support services. Incidents of domestic abuse can be logged without any content being saved on the device itself, including recorded incidents.

What's the outcome?

- Users can record incidents in a secure journal tool, using a text, audio, video or photo function.
- Bright Sky app is available in English, Urdu, Punjabi or Polish and is free to download on both iOS and Android devices.
- During the Covid-19 pandemic, there was a 47% weekly increase in downloads of the UK app¹ – clearly illustrating the need.
- Thousands of couriers and mail delivery staff in the UK, Ireland and the Czech Republic have been trained to spot the signs of domestic violence and how to react, referring victims to the app when possible.



¹ Source: Hestia – www.hestia.org/brightsky





Helping to safeguard teams on the frontline

Bodyworn Vision

Why Bodyworn Vision?

Ensuring the safety of emergency services employees on the frontline is a priority. The ability to live stream key events and play them back in high definition supports evidence capture. Blue light emergency services can use the technology to provide an accurate record of what's gone on and what's been said at the scene of an incident, as well as maintain real-time situational awareness.

What's the solution?

Our Bodyworn Vision solution combines cutting-edge video camera equipment, our market-leading network and remote storage for easy access whenever required. Attending emergency services personnel can later view high-definition still images taken directly from a video stream.

What's the outcome?

Secure local recording of high-definition video for forensic and evidential use. In Fire & Rescue, receiving live-streamed footage from the first people at a scene can help prepare fire crews for what to expect on arrival.





Relaying vehicle diagnostic data directly from a fire engine's cab

IoT-enabled SIMs connected to our network

Why IoT?

The Internet of Things makes it possible to transmit information captured from an object or device, such as the cab of a fire engine or bodyworn camera, over the internet. Ops and maintenance teams can then monitor the condition of the equipment remotely in real time.



What's the solution?

We are working with Emergency One, the UK's leading manufacturer of emergency vehicles and equipment, to install our IoT-enabled SIM cards in their fire engines. This enables the vehicles to stay connected to the internet. Data captured from sensors on board is transmitted by our IoT network back to Emergency One, where it is accessed through a web portal. The system collects data on a whole range of things from the vehicle's location and when it arrives at the scene of an incident, to when it uses its blue light functions and how much water it pumps.

What's the outcome?

Emergency One knows where fire engines are and when they need maintenance. Fire & Rescue vehicle fleets can be monitored remotely as the system is able to assess the status of equipment, predict and repair faults, monitor water levels and more. By catching problems before they happen and carrying out remote fixes, Emergency One reduces downtime – keeping fire engines on the road.





Protection against unauthorised drones

Vodafone Drone Defence

Why Vodafone Drone Defence?

The Civil Aviation Authority estimates that there are 130,000 drone users in Britain, but so far only around 50,000 people have registered. Drones can easily be used to access classified areas and steal private data. They can also be hacked for corporate espionage, and cause injury or even loss of life. Tracking them has become essential.

What's the solution?

Vodafone Drone Defence is a secure, robust cloud-based data analytics service focused on protecting locations, properties and events from security threats posed by unauthorised drones flying over and around them. It combines complex technologies into a single solution, with sensors and cameras connected to our global network and all data hosted in the Vodafone Secure Cloud. Access to information is via an easy-to-use portal, from anywhere, anytime.

What's the outcome?

Vodafone Drone Defence puts our customers in control of what's happening above them:

- Detect, classify and track drones in real time.
- Identify if the same drone is frequently appearing in a particular area.
- Gain visual information on the number of drones, their behaviour and identities.
- Continuous online monitoring and alerts when drones are detected.
- Integrate drone detection, enterprise and environmental data to understand the right actions that needed to be taken.





Tapping into the power of cloud

Microsoft Professional and Managed Services

Why Microsoft Professional and Managed Services?

Organisations are investing in Microsoft solutions as they look to better support flexible working, improve collaboration, and move more processes to the cloud. But de-risking migration and protecting against security threats can be complex without the right support.

What's the solution?

We work in partnership with IT support and technology provider Centrality, a Microsoft Gold Partner, to give emergency services organisations a range of expert services. Whether your organisation is just migrating to Microsoft 365, or seeking to extend existing investments, we help you to efficiently implement, manage and optimise Microsoft 365, Teams and Azure.



What's the outcome?

- **Migrate:** Legacy and new technology is integrated successfully by our experts at a pace that suits your organisation for a smooth transition to cloud built around Microsoft technology.
- **Scalability:** A flexible approach to Microsoft services enables you to scale up or down depending on your organisation's needs for agile operations.
- **Secure cloud:** Ensure your cloud deployment meets even the most stringent compliance and security demands with our service aligned to your specific need.
- **Optimise:** Regular expert check-ups ensure your technology is being used in the most effective way, boosting performance and significantly reducing overheads.
- **Managed:** Relieve the burden on your in-house IT team with dedicated Service Delivery Managers, continual service improvements and remote monitoring tools to improve your processes and free up resources.





Speeding up justice by allowing video evidence from the station

Live Link

Why Live Link?

Having more officers out in the community, able to fully assist victims at the scene of the crime, increases public confidence and enables stronger relationships with community safety agencies. Yet officers are often tied up for hours at a time waiting outside courtrooms to give evidence – time that could be better spent either in the community or working back at the station.

What's the solution?

Live Link rooms enable court evidence to be given through secure video conferencing directly from the police station via a closed, secure network. Vulnerable witnesses can provide evidence in a safe environment. Police stations can also connect to prisons and probation services with the same equipment. Easy to use video equipment offers a simple 'just switch on' approach with calls automatically answered when the court makes contact.

What's the outcome?

- Police officers no longer spend time commuting unnecessarily to and from court.
- Officers can work productively until called to testify – one police force calculated that 8 out of 10 officers previously called to attend court weren't required to give evidence, wasting precious policing time.²
- Officers are quickly deployed back into the community after giving evidence.
- Witnesses feel able to provide evidence without fear.
- A fully managed service frees up ICT departments to focus on other value-added tasks.



² Source: West Midlands Police





Managing data and making electric vehicle (EV) fleets a reality

Fleet Telematics

Why Fleet Telematics?

Emergency services vehicles today are more digital and more connected than ever. The data captured by this technology offers the potential for better fleet management and even a transition to electric vehicles.



What's the solution?

As a leading provider of automotive products and services, Vodafone offers powerful in-car telematics, usage-based data and fleet solutions. These include geo location, tracking and recovery services for stolen vehicles, as well as fleet analytics that help monitor, manage and optimise fleet vehicles. That's not all. Our Electric Vehicle Suitability Assessment (EVSA) can help emergency services organisations transition to electric vehicles by providing data analysis on which vehicles can be replaced with EVs.

What's the outcome?

We use analytics to provide fleet operators with valuable insights for managing vehicles more efficiently:

- Understand how you can decrease vehicle usage costs and fuel consumption, as well as reduce CO2 emissions for a smaller impact on the environment.
- Optimise your fleet data using one easy-to-use platform with a full overview of all your vehicles.
- Data analytics capture metrics such as state of charge and charging details.





Relaying vehicle diagnostic data directly from a fire engine's cab

IoT-enabled SIMs connected to our network

Why IoT?

The Internet of Things makes it possible to transmit information captured from an object or device, such as the cab of a fire engine or bodyworn camera, over the internet. Ops and maintenance teams can then monitor the condition of the equipment remotely in real time.



What's the solution?

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What's the outcome?

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Keeping communication lines open

BlackBerry AtHoc Crisis Communications System

Why a Crisis Communication System?

Crises happen, systems get hacked, communications are put at risk. Emergency services organisations are at the forefront when things go wrong, so an effective, easy-to-use and secure mass communication system is essential. This system enables organisations to share authoritative information with external targeted organisations, agencies and the public in real time during crisis. Public service organisations can then collaborate messaging to work together, known as BlackBerry Shield.

What's the solution?

This solution helps organisations manage their communications in a crisis. It has several components, including user geo-location based on mobile apps and a mass communication tool for alerting staff and other affected parties (partner organisations, other connected emergency services organisations) via SMS, Voice, Email, TV Screen. For example, this could be used to recall to duty any employees needed to help in the event of a disruptive incident. The app-based solution is controlled centrally via a portal.

What's the outcome?

The BlackBerry AtHoc Crisis Communications System gives real-time visibility into the safety status of staff during a crisis, supporting duty of care commitments. Assured rapid mass communication can be delivered across the organisation, while the built-in geo location, based on mobile apps installed on users' phones, can help to pinpoint where different teams are. The ability to alert the entire workforce at the click of button can also prevent costly IT outages. One example being an organisation could use the solution to contact all employees telling them not to open their emails following a cyber-attack.



Find out more [here](#)





Creating control of your network and delivering cost savings

Software Defined Wide Area Network (SD-WAN)

Why SD-WAN?

Keeping things simple is often the quickest and most efficient route to managing change at the same time as keeping your communications up and running. SD-WAN makes this happen by unravelling the complex network infrastructures that often characterise the emergency services landscape and providing topologies and equipment to give high levels of resiliency. In a sector tasked with keeping down costs, SD-WAN offers a clear, cost effective path to network transformation. Customer and application data security is critical for emergency services and SD-WAN provides industry leading encryption and integrated firewall based security applications.

What's the solution?

SD-WAN is simply an SD network applied to a WAN. When bandwidth and capabilities, such as application prioritisation and security features, need to be added to your network in record time, for example to accommodate the demands of a major incident room, Vodafone SD-WAN allows organisations to flex their network needs quickly and easily and be assured of a highly resilient infrastructure. It uses the cloud to dynamically steer connectivity and its smart, yet simplified network technology delivers a sustained communication network service 24/7.

What's the outcome?

Emergency services professionals can confidently use their digital tools to collaborate and work securely across both legacy and new systems. Network managers have a single point of access for quick and easy control of a network that can be configured, managed and monitored to ensure application performance and end user experience is optimised. Crucially, gateways that allow us to support a hybrid estate of traditional and SD-WAN sites during transition to your new SD-WAN ensure that any dual running costs are kept as small as possible.





Turning emergency vehicles into mobile WiFi hotspots

Vodafone Smart Hub

Why Vodafone Smart Hub?

Incidents and accidents are dynamic events, located anywhere from a dense urban centre to a rural community. The ability to transform emergency services vehicles into mobile WiFi hotspots gives incident command/HQ ears and eyes on the ground where it matters.

Smart Hub Customer

Story: SSEN

Find out how we're keeping SSEN's remote field engineers connected and productive



What's the solution?

Our Smart Hub delivers instant, reliable and flexible Wi-Fi, GPS location and media services, wherever there is 4G coverage. With reliable connectivity, teams in emergency services vehicles can live stream from an incident to provide HQ with a better understanding of events. Smart Hub is able to sense a weak signal strength and optimise it to maintain connectivity. Using a High-Gain Antenna (HGA), it can capture a 4G signal and create a WiFi hotspot with a radius of up to 100 metres.

What's the outcome?

- Emergency responders have the assurance that they can relay images and stay connected in even the most remote locations.
- Valuable time is saved by not having to find somewhere with a signal in an area with weak signal.
- Responders on the ground easily share critical information and stream media within minutes of installation, and in nearly any location.





West Midlands Police



What they wanted

Already deploying digital technology to boost efficiency, West Midlands Police recognised it needed to go further to meet rising citizen expectations and address budgetary constraints. A technology taskforce identified the need for a greater physical presence on the streets by freeing up officers from paperwork and lengthy periods giving evidence at court.

What we did – secure video conferencing

Our Live Link fully managed service for West Midlands Police supports live streaming between the police station and any court in the county with the same equipment via a closed-link network.

Outcomes achieved

- Officers no longer spend time travelling to and from court to give evidence, where they often found themselves sitting for hours before being told they weren't needed after all.
- Live streaming is also possible between the police and prisons or probation service.
- Officers can spend their time more productively while waiting to give evidence, getting them back out into the community faster than ever.



Combined Police, Fire & Rescue Service and Ambulance

What they wanted

A Proof of Concept for the BlackBerry AtHoc Crisis Communications System aimed to scope the many use cases for a combined mass communication solution embracing all three emergency services.

What's the solution?

Working with the lead emergency services partner, Vodafone developed numerous use cases, including the process of internal communications for recall to duty, different channels of communication, collaborative resourcing of an incident, and the system's ability to produce post-event reports on the system usage. Using geo location-based technology, the solution also provides a mapping system that can overlay all three emergency services organisations into one map and pinpoint each of their users at an incident.

What's the outcome?

The project established as 'high priority' a number of the use case scenarios, such as those following:


- The process of emergency services organisations sending communications between each other using AtHoc's instant CONNECT system.
- Requesting a photo from a specific user based on their location – using the built-in geo location functionality when the app is installed on users' phones.
- Secure two-way messaging, geo-coding, reporting a suspicious package and reporting an emergency.
- Various processes of internal communications between management and staff, such as to request a hyperlink is clicked to view web/network hosted information.

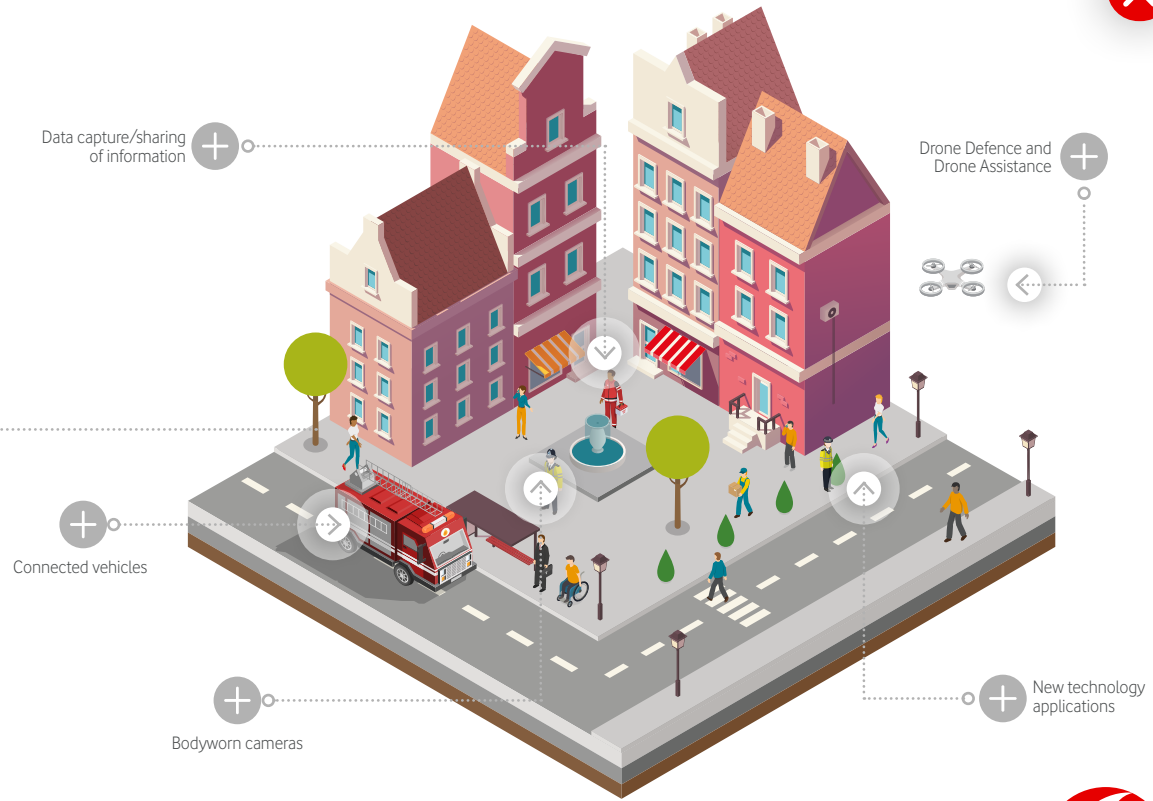


How can Vodafone help?

A mobile workforce

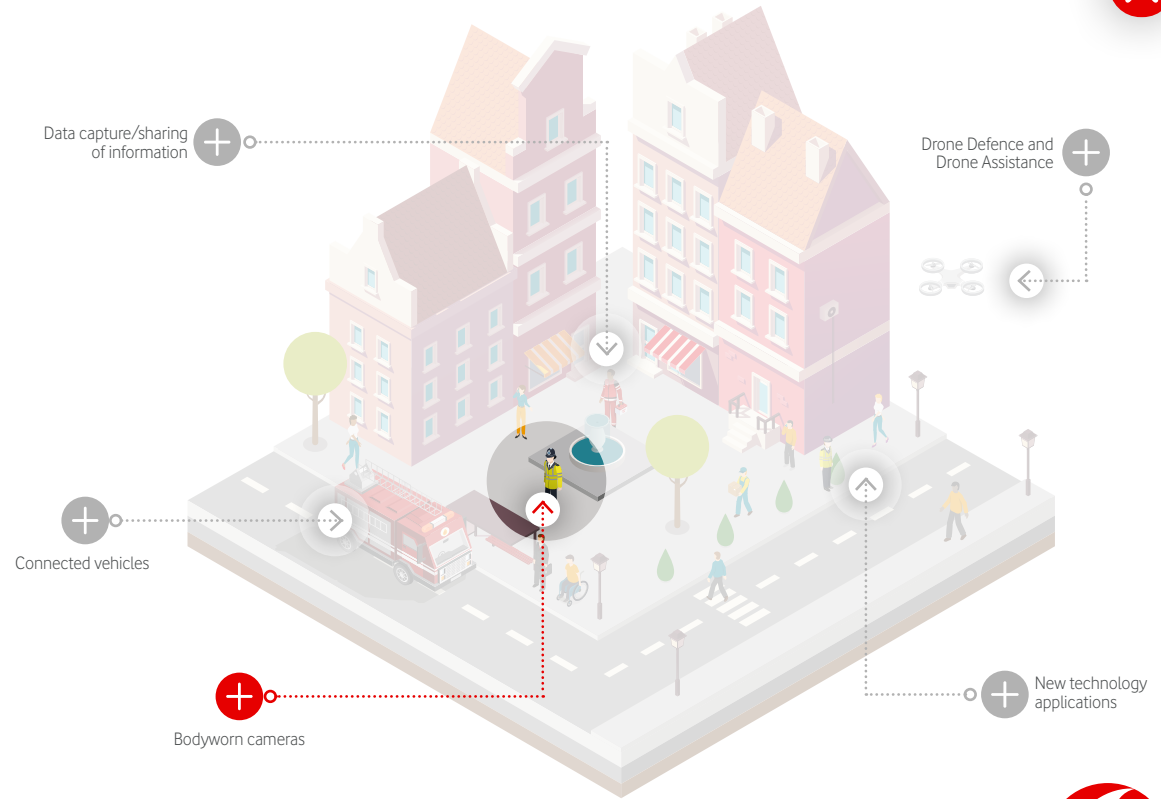


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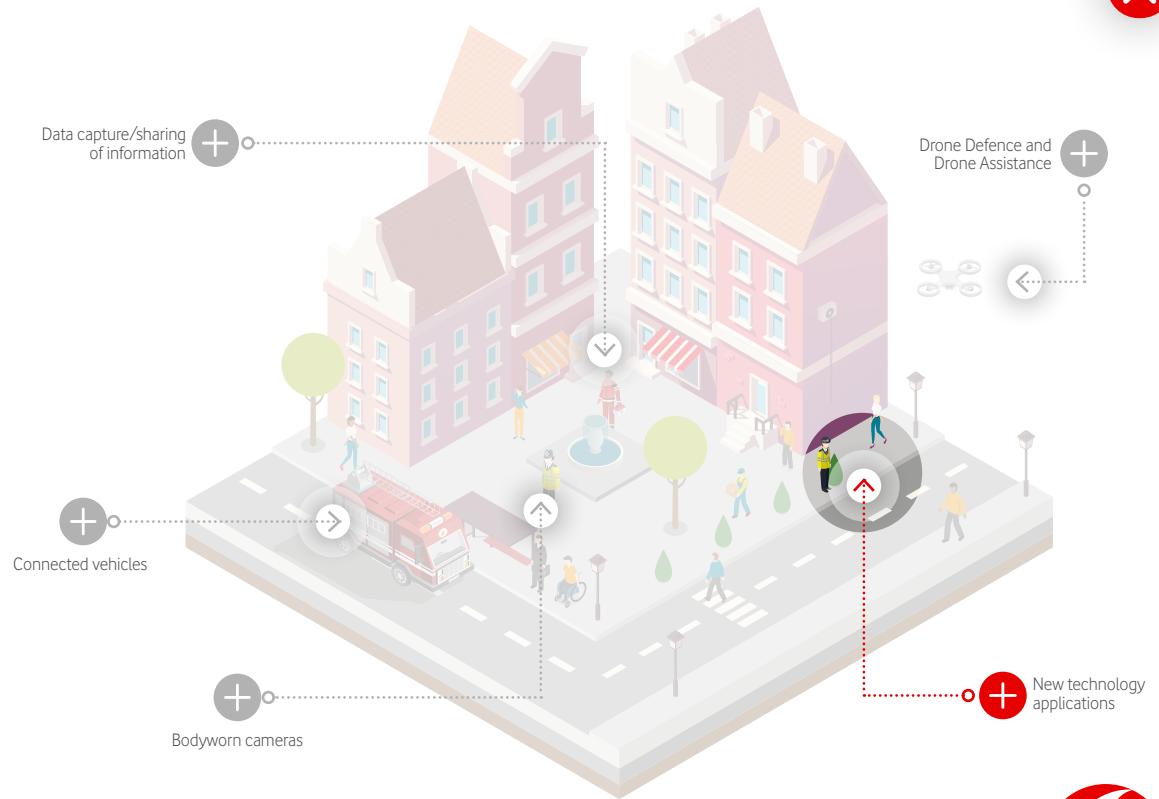
Bodyworn cameras

- Safeguarding citizens and frontline teams
- Real-time streaming of high-definition footage
- Access from HQ/ops command gives instant view of the situation
- Evidence capture and use of new AI technology



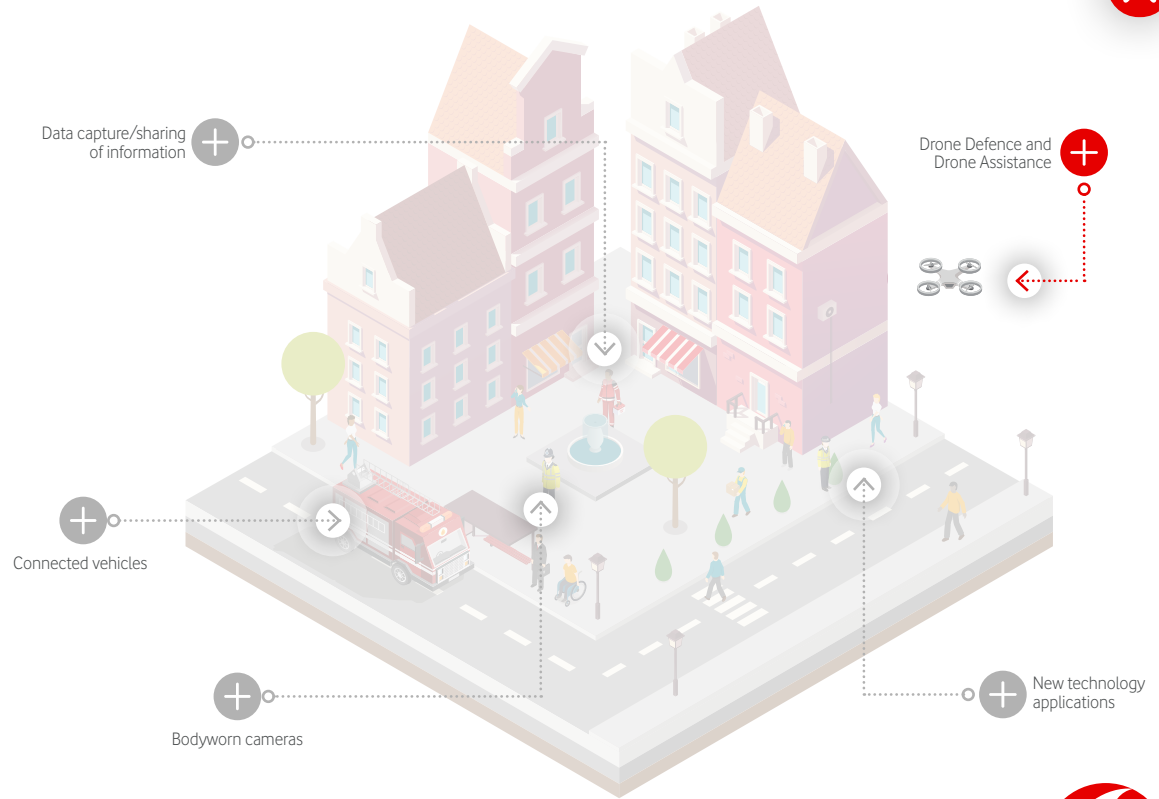
New technology applications

- Wearable technology creates 'silent SOS' facility via biometric monitoring
- Contextual training through AR or VR decreases onsite training needs
- GPS and geo location apps help to improve resource management, maximise availability and reduce incident response times
- 4G bespoke apps for First Responders alert the nearest responder to an incident and connect them with central support



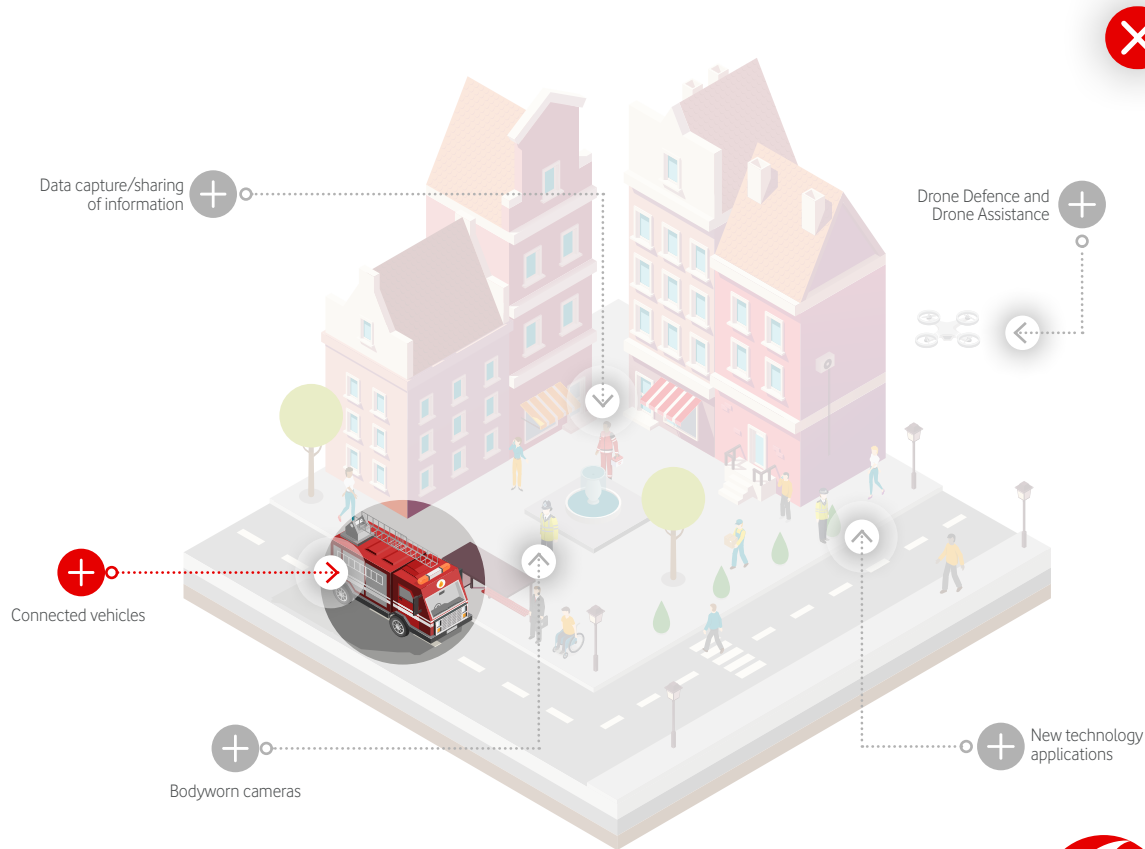
Drone Defence and Drone Assistance

- 'Shadowing' officers for safety and surveillance using 5G-enabled drones
- Early risk assessment and evidence capture
- Increase operational capacity and obtain quicker outcomes due to the reduction in 'missing' officers
- Anti-drone technology to quickly detect the presence of drones within a perimeter



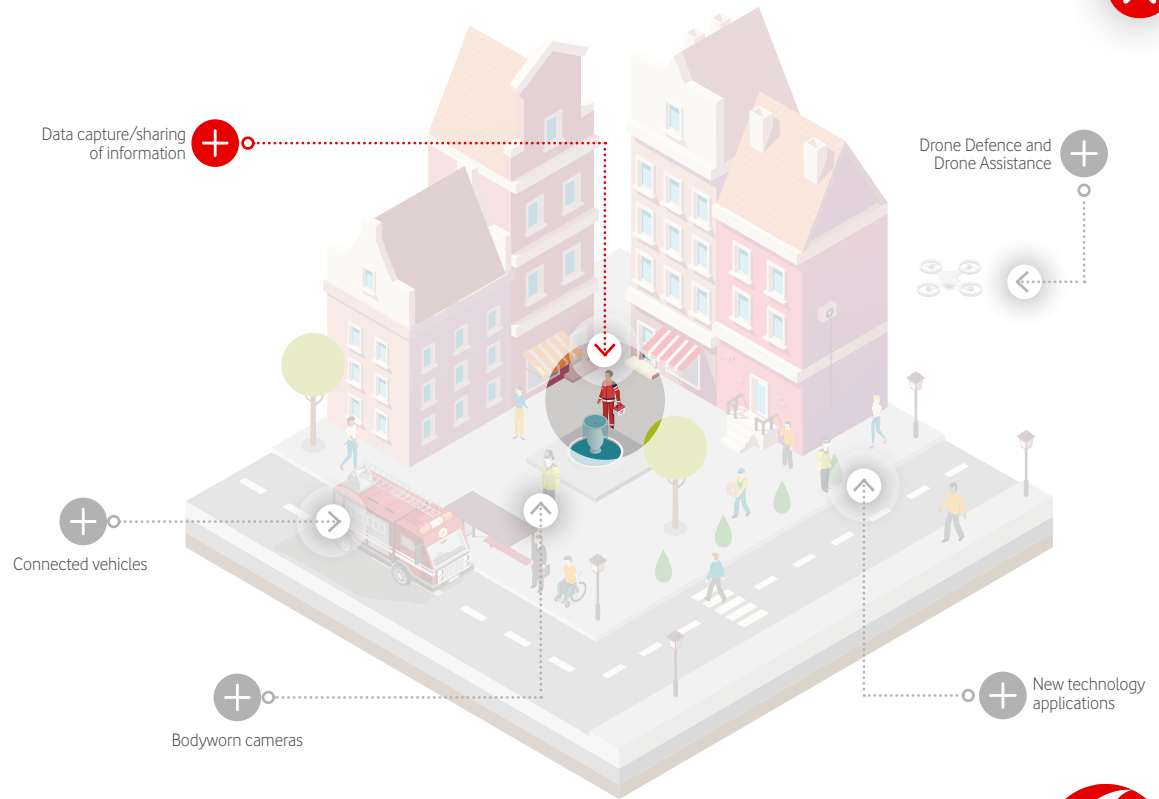
Connected vehicles

- Real-time monitoring means pre-emptive maintenance to reduce running costs
- Emergency notifications and traffic control
- Live streaming from ambulances via WiFi for rapid diagnosis and treatment
- Fire crews live-streaming an incident back to operational command can help shape the response to evolving situations



Data capture/sharing of information

- Access to centralised data at an incident e.g. patient histories, intelligence checks
- Data capture on mobile devices: electronic witness statements, crime reports updated and photos of known offenders shared
- Smartphone apps enable frontline workers to check emails while out in the community – keeping feet on the ground
- Reduces admin time spent re-keying information



How can Vodafone help?

Operational Collaboration



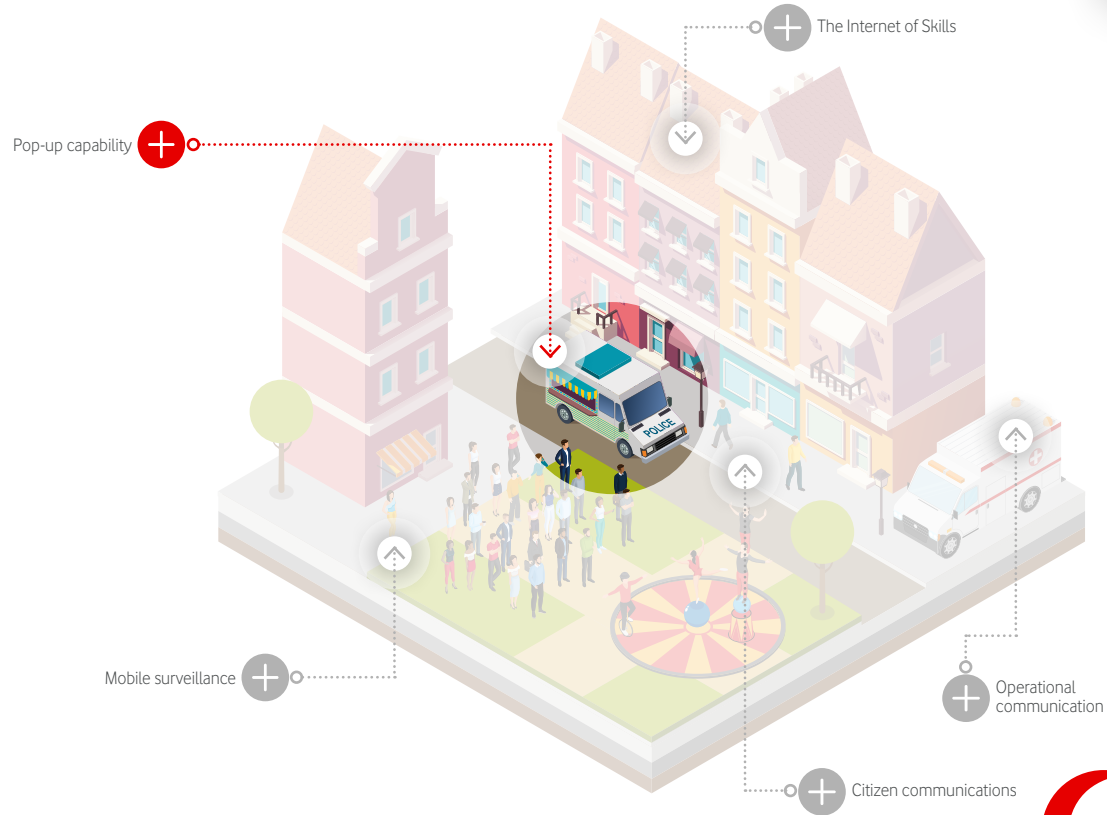
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Pop-up capability

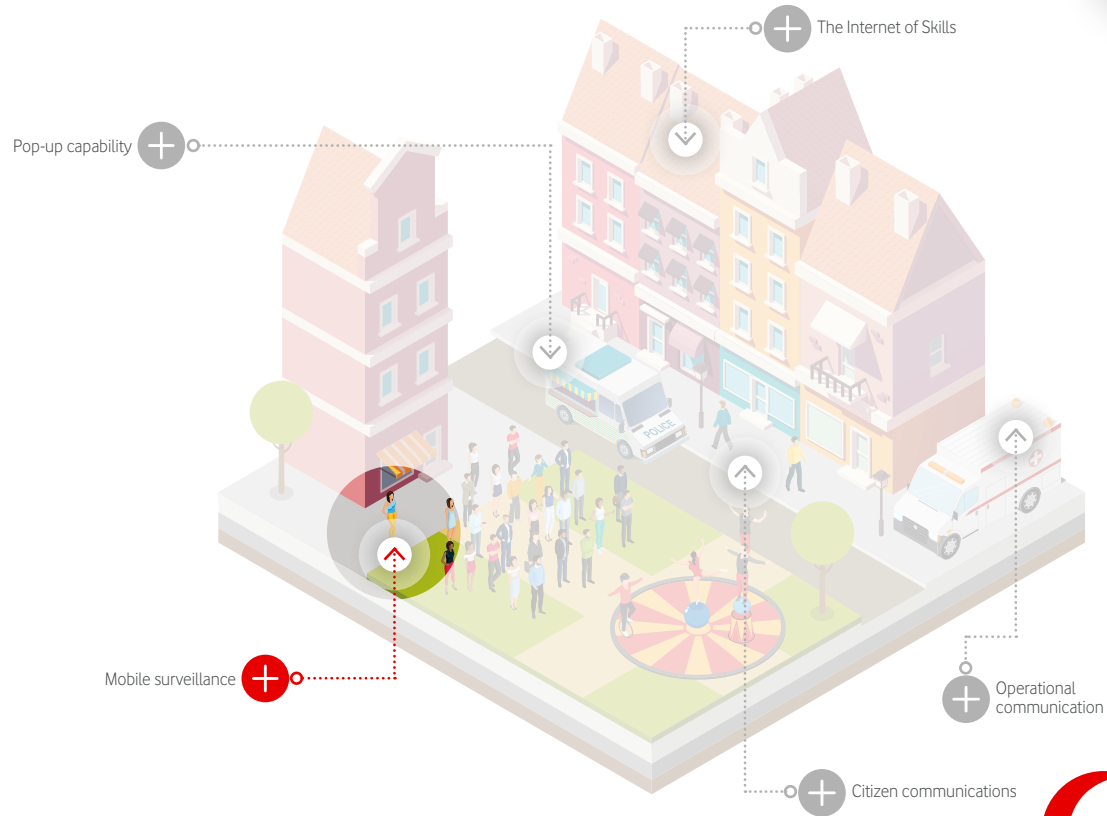
- Smart Hub creates instant mobile WiFi inside emergency vehicles
- Services can be delivered on a wider regional basis and in remote locations where there is a weak signal
- Extended through video-based capabilities





Mobile surveillance

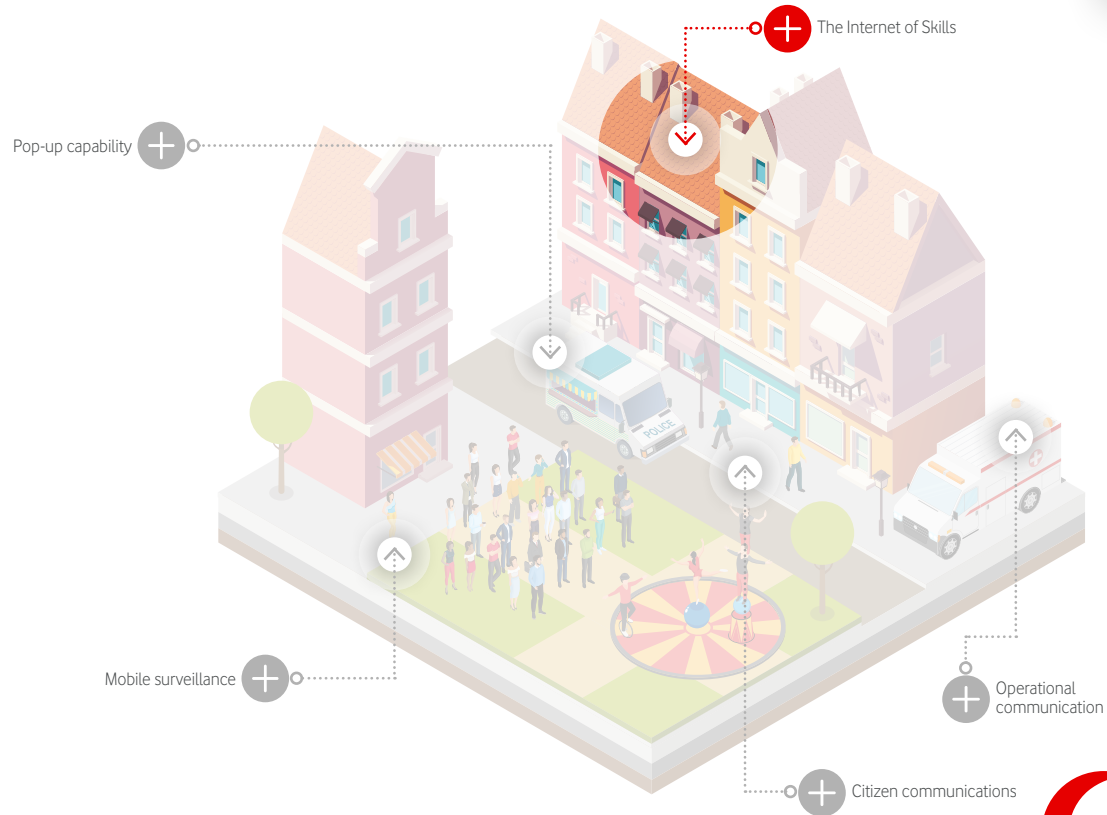
- Tactical mobile cameras can be deployed e.g. at events, also streaming high-definition output
- Analysis powered by AI and machine learning
- Enables visibility 24/7





The Internet of Skills

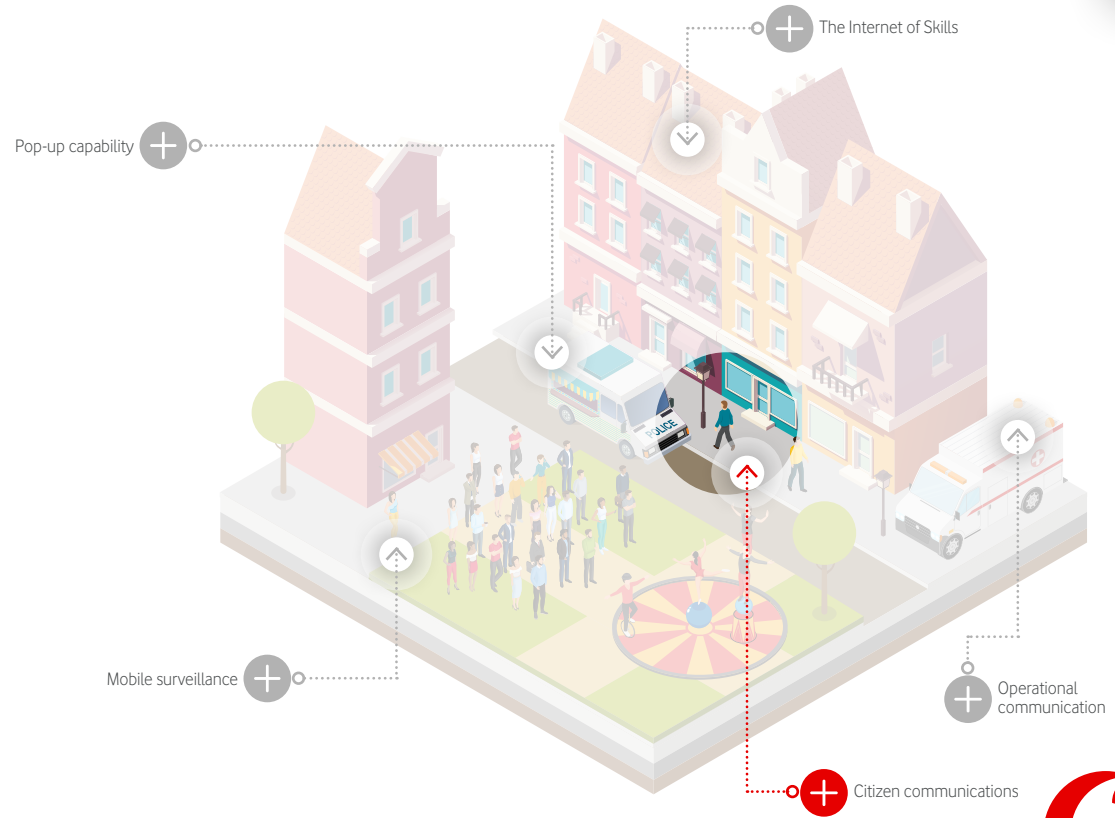
- The transfer of skills through the internet without lag creates capability to transfer senses e.g. haptics
- Remotely and safely deploy services into locations and situations in real-time such as crime scenes





Citizen communications

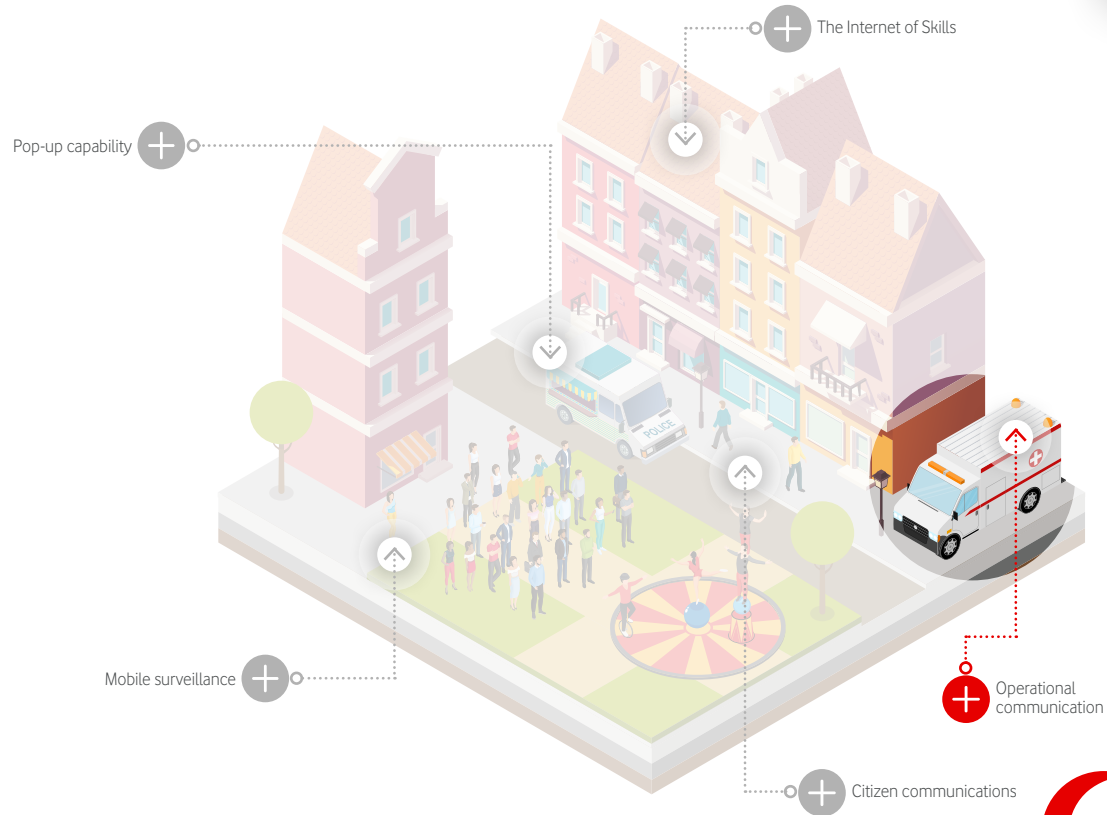
- Supplement 101 service with social media interaction – communicating in ways people are now comfortable with





Operational communication


- Modern Unified Communications delivers collaboration onsite to offsite
- Presence, video, messaging and document sharing
- Secure video links between police station and courts – enabling officers to testify via live streaming from the police station
- Real time crisis communication management with an easy-to-use and secure BlackBerry mass communication system
- Geo location-based technology provides a mapping system that can overlay location of attending emergency services organisations into one map and pinpoint users at an incident

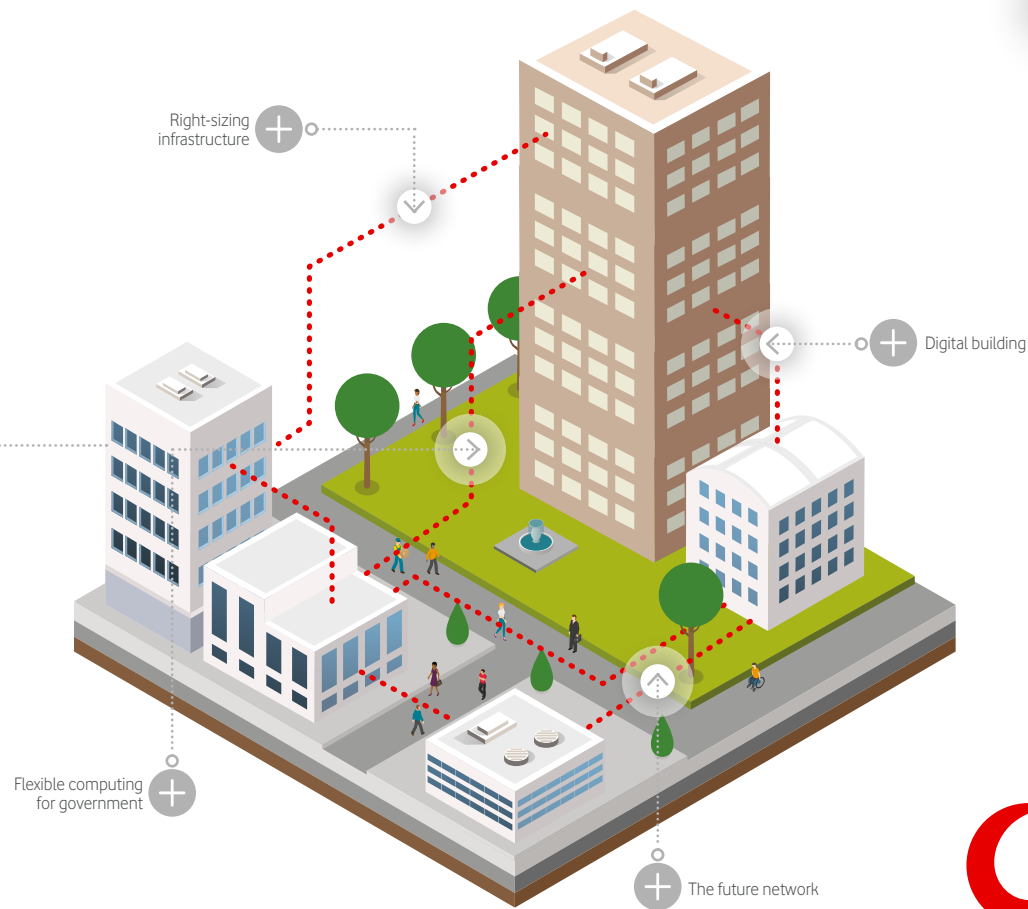


How can Vodafone help?

Collaboration to Infrastructure



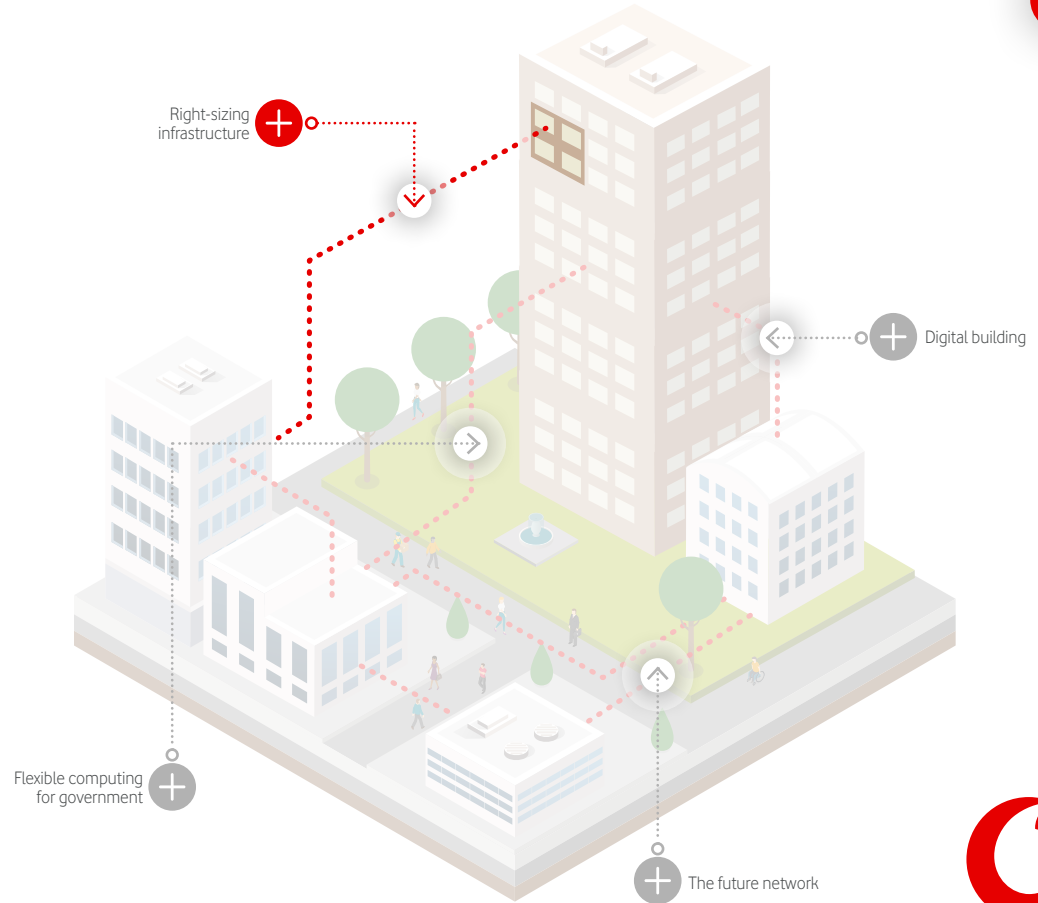
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Right-sizing infrastructure

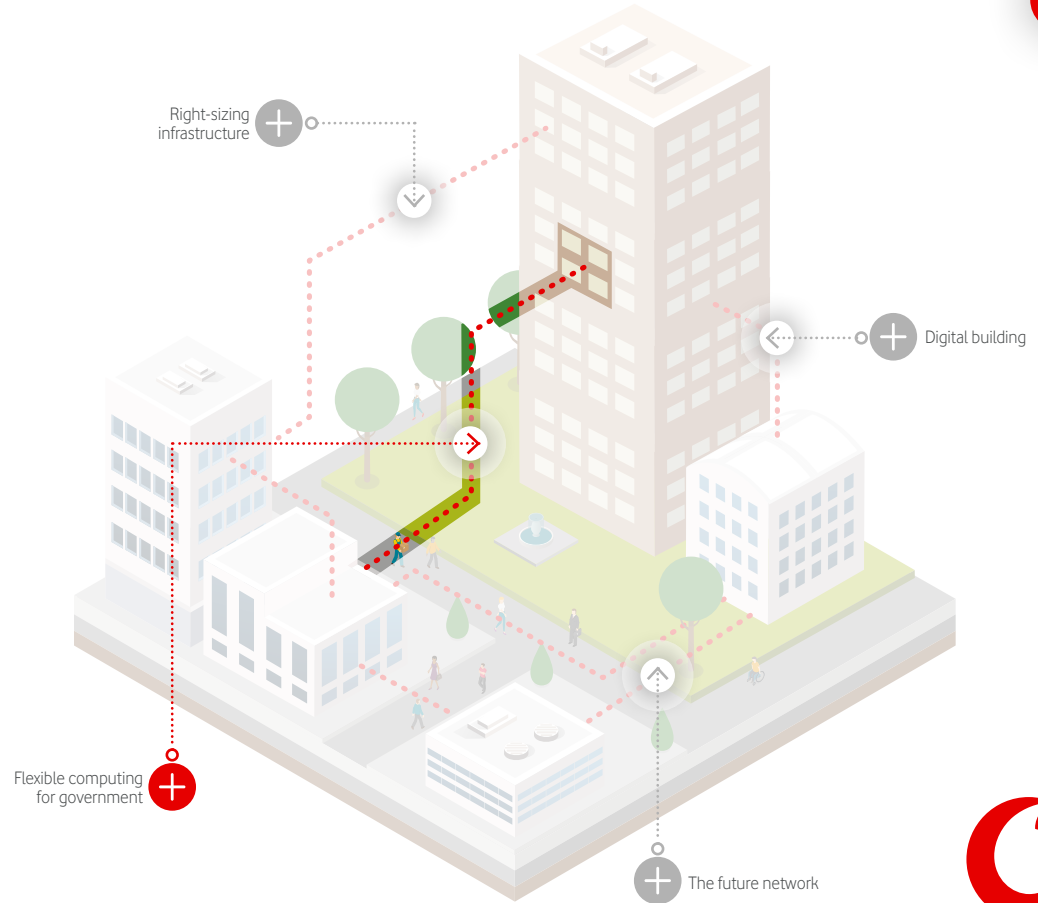
- Unified Comms and Contact Centre are enablers to right-sized infrastructure
- Facilitating predictable and reduced cost, improved experience and increased uptime





Flexible computing for government

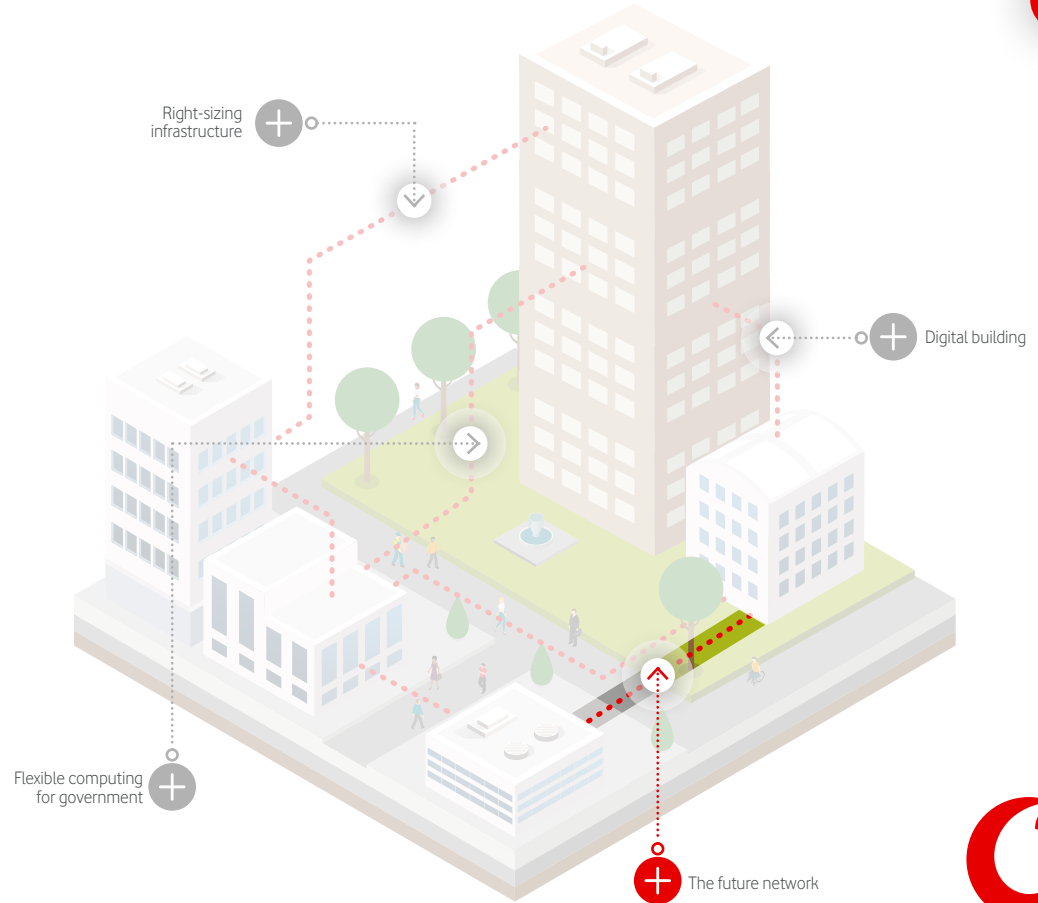
- Secure, agile pay as you grow cloud designed for the UK public sector
- End-to-end virtual private cloud environment highly adaptable to Emergency Services organisations' needs
- Easy to use, scalable and provides peace of mind – the platform is highly secure and approved to hold 'Official Sensitive' information





The future-proof network

- Software Defined Networking enables the network to be configured centrally, which means changes can be automated and made quickly, in response to organisation demands
- SD-WAN gives network managers a single point of access for quick and easy control of a network that intelligently anticipates demand
- 5G creates the opportunity for a fully mobile private network
- As the emergency services sector continues to introduce Internet of Things (IoT) applications, 5G's capability and low latency will support the collection of massive amounts of data from IoT apps





Digital building

- Maximise benefit from existing CCTV infrastructure with intelligent cloud-based overlay
- Save time identifying incidents and responding to alerts
- Secure video links between police station and courts enable officers to testify via live streaming from the police station – avoiding hours of travel and waiting at court
- Ops and maintenance teams can monitor the condition of buildings, vehicles and equipment remotely in real time via our Internet of Things (IoT) network, which transmits information captured out in the field by our IoT enabled SIMs

