

ONE MET

Digital Policing Strategy

2017 - 2020



METROPOLITAN
POLICE

NEW
SCOTLAND
YARD

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Part One: Transforming the Met



Angus McCallum
Chief Information Officer,
Metropolitan Police

Introduction

The mission of the Metropolitan Police (the Met) is to make London the safest global city. The scale is clear; in London, there are 8.63 million residents and millions of commuters, visitors and tourists who come into our city every day.

Digital Policing is the Met's technology function. The Digital Policing focus for the next three years is providing effective services for our 45,000 end users and every member of the public, all within current financial constraints. Digital Policing has an important role to play. Our aim is to give every customer the best possible technology experience, from our Police Officers working in stations and on the street, to members of the public who want to engage with us in new ways. It is our responsibility to deploy the right technology and to increase the speed and efficiency of delivery.

The Met is committed to ensuring all of our people have the information technology they need to do their jobs. Citizens will be able to use a variety of digital channels to communicate with us, report crime and carry out routine transactions.

In all of this, the technology will be intuitive, easy to use and user focused. When buying new systems, the user will be at the heart of everything. Digital Policing will measure and manage customer satisfaction and seek to continually drive improvement.

This strategy document sets out the Met's digital vision. The work needed will be challenging, but the end goal is important – great technology for our customers. The Digital Policing team is full of talented and dedicated professionals, who share a drive and determination to transform the Met's digital services in line with the needs of the business. Over the last year we have increased the pace of change, and we will need to move even faster. We will deliver, and keep delivering, the right new technology for our users and we will establish sound principles which support the wider Met business.

I know this will be an exciting time and we have many challenges. We must take the opportunity to make a real difference to the lives of the people of London.

The role of IT in the success of the Met will only increase over time. This document sets out how Digital Policing will contribute to this success. I hope you find the document informative and I welcome any feedback you have.

Angus McCallum
February 2017

Role of Digital Policing

Technology is becoming increasingly important for the delivery of services in the digital age. More and more of our customers expect digital channels that allow them to communicate with us. Our workforce often uses home technology that is more intuitive than that provided by the Met. Staff, Officers, businesses and the public (our customers) are ready to engage with us in new ways. Digital Policing is focused on making sure the Met has the right technology to do this. It needs to be delivered now, and it needs to meet the needs of our end users.

This strategy sets out the Digital Policing focus to deliver modern technology for our internal customers (police officers and staff) and our external customers (the general public and businesses). We will achieve this by adopting a set of well defined ways of working, supported by clear principles, standards and patterns. We already have great people and will continue our commitment to nurture and develop them, seeking expert assistance when necessary to achieve our goals. We will continually seek feedback from our customers and adapt as quickly as allowed when our environment changes.

This document outlines the way in which Digital Policing will guide technology selection and implementation to support creation of an effective and efficient police service and the Met vision 'To make London the safest global city'. This document has two main parts.

- **Transforming the Met:**
Defines what our customers need from us (the business drivers) and the technologies which will support the Met's objectives over the next three years.
- **Digital Policing:**
Describes the ways of working that will guide technology delivery.

In addition, there are two appendices. The first is Personas and User Stories, which illustrates some of the impact technology change may have on our customers. The second is the Current Transformation Journey, which outlines the current programme of technology enabled change.

Achievements

The past 12 months have seen a radical transformation in the organisation of Digital Policing, and some transformation of the Met Technology Estate has begun. This strategy is the successor to the 2014 – 2017 Total Technology Strategy and continues to drive forward positive change, building on the work of the previous strategy.

Key achievements from the past three years include the following:

- We are rolling out new, modern desktops, laptops and tablets to replace legacy Windows XP computers.
- We have successfully piloted Body Worn Video and we are rapidly deploying the technology to our officers.
- We have transformed to a new organisational model, designed to provide an effective intelligent client function aligned to the needs of our customers.
- We are supporting the Met's Estates Strategy, and in particular the move into New Scotland Yard (Victoria Embankment) through the provision of new tablet and laptop devices.
- We are deploying a new internet platform that will allow the public to report crime, through an intuitive and friendly interface.
- We have started a robust process for putting in place a new integrated policing platform.
- We have appointed a new set of suppliers for the Met's main technology services and transition to these suppliers is largely complete.
- We have piloted new mobile devices, including tablets, and are now rolling these out. These devices increase the information available to officers, allow applications to be accessed whilst on patrol and reduce the amount of time spent in police stations.

The Met Vision

Need for transformation

The Met has a global reputation based on successes, past and present. We are proud of the quality of our people, our dedication to fighting crime and our mission to make London the safest global city. Not resting on our laurels, the Met must respond to both the challenges of austerity and the need to continually improve and transform to meet changing demand. The Met is the largest police service in England and Wales, and tackles a huge array of challenges.

The business drivers below reflect the Met as a whole and create the demand for technology.

Keeping pace with a city that is growing and changing

London's population continues to grow, with numbers set to reach more than nine million by 2020. London is home to more than 270 nationalities and over 300 languages are spoken. It has the highest foreign-born population of any major city in the world. The growth in London's youth population provides a clear opportunity for the Met to focus on prevention, rather than relying on reactive investigation and response.

Responding to crime that is increasingly complex and costly to investigate

Whilst we have seen decreases in some traditional volume crimes, the identification and reporting of more complex crime types (including terrorist offences, sexual offences and online crime) has risen and is expected to rise further in the future.

Building a workforce that is fit for the future

We need to tackle bureaucracy and concentrate on how best to serve the public rather than maintaining tradition for tradition's sake. The challenge is therefore to attract, develop, reward and retain the right people, with the right skills to adapt to new ways of working.

Responding to the challenges of austerity

Behind all of our plans is the significant financial challenge facing the Met. Whilst the change so far has mainly impacted on 'back office' functions and police staff, all parts of the Met will be affected in the future.

Met strategic business context and objectives

The approach to realising this vision is captured in the 'One Met Model', the Service's strategy and vision. At the core of this strategy, the Met has defined four key areas of transformation, supported by estates and technology initiatives. These areas establish the strategic context for this Digital Policing strategy.

Prevention and reduced demand

The Met will place prevention at the forefront of our policing strategy, with a focus on reducing victimisation, offending and harm across London. We will transform how people contact us, making more use of digital channels in order to improve the service we deliver, as well as better understanding and managing how demand flows through the organisation. We will better manage internal demand, as well as public demand, using new technology to drive out unnecessary paperwork, reduce bureaucracy and make it easier to interact with one another.

Smarter and more productive ways of working

The Met will restructure frontline policing to operate at greater scale, improving processes and reducing hand-overs to increase productivity. We will become increasingly mobile, using technology to allow our people to access information quickly, whenever and wherever they need it. We will empower officers to make quicker decisions, closer to the frontline.

Collaborating in policing, with our partners and the public

The Met will take a team-based and multi-agency approach to providing the best protection to the most vulnerable people. This will involve partnering with emergency services, local authorities, charities and the third sector to ensure that the organisation best placed to respond to an issue is able to do so.

Equipped and empowered people

The Met will create an inclusive and supportive culture, and get more 'right first time'. Our leaders will focus more on building team effectiveness to improve performance and less on oversight and checking. Officers and staff will be able to make more decisions themselves, with greater emphasis on self-development and on the job coaching to improve the capability of our people.

Business Capabilities

Business capabilities needed to meet Met strategic objectives

The foundations of this strategy are realised as a set of business needs that are wholly or partially delivered by the technology Digital Policing can provide. Digital Policing is an essential component in the drive to advance the four Met objectives (above).

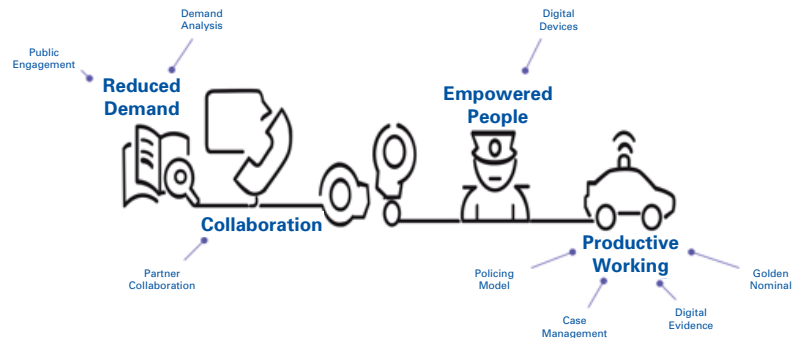


Figure 1 – Digitally enabled policing

Prevention and reduced demand

Public engagement

The ability to interact digitally with the public, using social media and online reporting. We will make use of digital technology to push corporate and local messages out to Londoners and will support third party innovation by making 'Open Data' available.

Demand analysis

The ability to more thoroughly and consistently understand Met demand and improve outcomes by exploiting the breadth, depth and quality of information that we hold.

Collaboration within policing, with partners and the public

Partner collaboration

Collaboration, including colocation and secure data sharing, covering prevention, first contact, incident response and prosecution.

Equipped and empowered people

Digital devices

Provision of digital devices which help front line officers access and collect information.

Smarter and more productive working

Case management

A central place for all communication, interactions and updates about a reported incident, person or case, allowing different operational units to utilise common tools. Individual officers will benefit from easy to use systems where they enter data only once while being able to access available intelligence in real time.

Digital evidence

Enabling the use of multiple forms of digital evidence (eg video interviews, smart phone recordings), integrated with case and investigative systems.

Golden nominal

Making policing person-centric. Having a single person view against which we can report, compile intelligence and progress casework. We will also use this for identifying and helping the most vulnerable in society and protect them from harm.

Policing model

Supporting a new model of policing where we assign resources based on risk assessment, officer skills, their availability and their proximity to the incident.

Digital Policing

Digital Policing vision

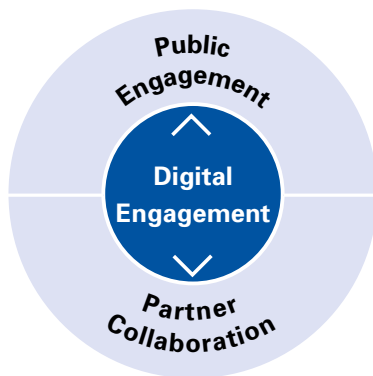
To develop, deliver and operate a definitive portfolio of IT services that support the Met to make London the safest global city.

Digital Policing objectives

The objectives of Digital Policing will frame our approach to realising the Met's technology strategy. These objectives are:

- Fully integrate Digital Policing into the One Met Model business change programmes to reflect Digital Policing as a partner that supports the organisation.
- Improve efficiency by targeting unnecessary waste to release capacity and improve value for money.
- Deliver our commitments within the One Met Model portfolio to enable progression towards the target operating model for the Met.
- Maintain current service, undertake continuous improvement and enable enhancements to the services provided to the Met.
- Develop and enable our people to deliver Digital Policing services in line with the Met's values and behaviours.

Enabling Technologies



Introduction

This section introduces technologies that will enable the Met's transformation. These technologies are divided into four themes:

- Digital Engagement;
- Digital Police;
- Information Driven Policing; and
- Durable Infrastructure.

Digital Engagement

Ninety-three per cent of the UK population own or use a mobile phone (71 per cent being a smart phone) and 80 per cent of adults in the UK have access to broadband ¹. Londoners expect to engage with their service providers, including the Met, digitally and when on the move.

Portfolio

- We will provide the public with digital channels that are responsive to their chosen device (desktop, tablet, mobile) and provide a mechanism to report non-emergency crime and information about service-wide and local events.
- We will support online reporting as well as 'live chat' for more interactive situations.
- We will provide a platform that allows Met staff to identify trending local issues and engage with the public over social media.
- We will provide the ability to digitally initiate and progress common, high-volume transactions such as collision reports and permit applications.

Future ambition

The encouragement of third party innovation through support for Open Data should see a collection of apps being made available to the public, providing them with information of interest and supporting their personal safety. We will also examine new ideas for driving this innovation such as coding competitions and Met hosted hackathons. Such innovation has the potential to greatly enhance situational awareness and local intelligence.

¹ See Ofcom Fast Facts (<https://www.ofcom.org.uk/about-ofcom/latest/media/facts>)



Delivering the vision

Introduction of these technologies will help the Met to be a more visible and accessible presence and will facilitate the building of community partnerships. They will support an approach to policing that puts the public at the heart of delivering the Met's objectives.

Digital Police

To help officers better serve the public we must provide them with the tools they need, usable in the variety of situations in which our officers operate.

Portfolio

- We will ensure that solutions support the needs of core Met personas²; Field (front line officers and staff), Fixed (fixed location officers and staff) and Flex (specialist officers and staff needing to work in operational and office environments).
- We will update and refresh existing Met desktop hardware. Old and obsolete desktop PCs will be replaced with new desktops for Fixed workers and tablets and laptops for Field and Flex workers.
- We will select from the most appropriate operating systems capable of meeting Met needs for application functionality, security and device management.
- We will deliver applications where as many as possible of the functional elements are deployed on a common platform, rather than on the device, reducing the complexity and cost of system updates. Common services will enable identity assurance, user experience management, data capture and display, and context and location capture.
- We will continue to deploy Automatic Number Plate Recognition for vehicle identification.
- We will enable easier access to digital data sources, such as CCTV. This will allow more effective prevention and response to crime.
- We will continue to deploy Body Worn Video, supporting the direct capture of evidence and driving a greater degree of transparency and public confidence.
- We will test non-standard devices (including 'Bring Your Own' technology) through the deployment of relevant solutions with standard secure software. Through this technology, we will provide email 'on the go' to staff personal mobile phones.

² Personas are examples created to help understand and reflect the needs of groups of technology users.

- We will implement solutions that exploit a range of device sizes (eg mobiles, tablets, wearables).
- We will take a layered approach to solutions; considering the applications, operating system, device size, device management and support infrastructure separately.
- We will deploy new command and control facilities, providing a foundation for improved resource deployment and better integrated response.

Future ambition

Recent advances in facial recognition and other biometric technologies offer the prospect of better identifying and tracking people of interest. A range of innovative applications and devices may support the early and increased capture of evidence in the field, leading to significant time savings for Met officers freed from having to return to base. For example, advanced image processing is already being used, by some forces, to analyse eye movements in the detection of suspected 'driving under the influence'. The digitisation of call details combined with the Met's THRIVE+³ assessment framework could lead to the partially automated despatch of officers, through their smart devices. Finally, wearable devices offer the opportunity to understand more about the wellbeing of Met officers, through the monitoring of factors such as movement.

Delivering the vision

The 'digital officer' will be better equipped to identify and pursue the most harmful criminals.

Information Driven Policing

Policing is fundamentally supported by the gathering, organising and presenting of information. Information Driven Policing accepts this fact and provides the Met with the structures, techniques and tools to fully exploit the information that it gathers and generates.

Portfolio

- A critical area of police operations is the ability to track data about individuals across the array of incidents and reports through which they may become known to the Met. We will do this more effectively by assembling a single, person view combined with associated views of objects, locations and events. This will only be done in compliance with Data Protection legislation.



³ THRIVE+ (Threat, Harm, Risk, Investigation, Vulnerability, Engagement) is the Met's standard framework for understanding public demand and prioritising the deployment of proportionate resources.

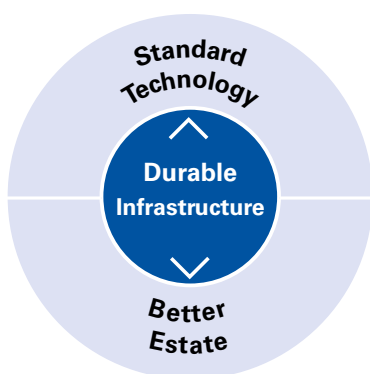
- We will share operational data with blue-light partners to improve the effectiveness of response and operating efficiency.
- We will enhance our integration platform to facilitate the efficient flow of data between Met systems.
- We will provide officers and staff enhanced capabilities for standardised performance reporting.
- We will introduce mechanisms to reliably retain, index and associate to the digital assets generated through Met activity (eg Body Worn Video) and that of the general public (eg uploaded videos).

Future ambition

We need to consume, structure, geotag and retain new streams of data from officer and Police Community Support Officer (PCSO) devices, key assets, civic infrastructure and relevant third parties to provide a rich, up-to-date picture of activity in the city so that we can quickly identify incidents (perhaps as they happen) and efficiently target a response. By extending use of our data integration platform, key information about interesting events can be published to other first responders. Such a facility could be especially critical in quickly identifying evolving major incidents, such as acts of terror. As the Met's information base improves, a predictive analysis solution has the potential to compile intelligence and identify crime patterns.

Delivering the vision

These information facilities will greatly improve the targeting and controlling of the most prolific and dangerous offenders.



Durable Technology Infrastructure

To reduce the complexity of development and service delivery, we need a standard, durable and secure technology infrastructure. Our aim is to build an infrastructure that is fit for at least the next five years. We recognise technology is moving quickly, so we will deploy an infrastructure that is designed around where the Met will be in the future rather than just where the Met is now.

By refreshing our infrastructure, we will build a solid foundation that will bring three key benefits:

1. Increase in the reliability and speed of our desktop, mobile and applications environments.
2. Faster deployment of projects as frequent infrastructure revision can be avoided.
3. In keeping with the drive to reduce costs, this infrastructure must also be cheaper to run.

Portfolio

- We will provide scalable infrastructure that can flex to the demands of the service, decreasing the time needed to deploy the infrastructure that supports the roll out of new services.
- We will adopt public cloud offerings as part of our 'Cloud First' principle. We will only maintain our own Met data centres for specialised services.
- Where we need specialised services, we will utilise virtual private cloud, and similar technologies, to provide consolidated, virtualised, commoditised infrastructure.
- We will, of course, only use public cloud where we are sure we can meet our obligations under the Data Protection Act and the General Data Protection Regulation (coming into force in 2018), and where we are satisfied that the very best in commercial security is applied.
- Our cloud approach will allow us to only pay for the capacity and facilities that we use. We will also be able to rapidly move solutions if required (for example, where there is a commercial advantage), and flex our capacity up and down in response to key operational events.
- Our cloud approach will also allow us to more easily deliver applications via the Internet, opening up a range of possibilities for remote and mobile working.
- We will leverage our hosting infrastructure investments by appropriate redeployment of existing equipment from our old data centres to our new facilities, repurposing hardware to provide a virtualised environment where possible.
- We will deploy Microsoft Office 365 (with its support for mobile workers) as the core office productivity platform, utilising Office, the Skype for Business instant messenger and video conferencing tool, and other tools for collaboration.
- We will provide corporate Wi-Fi at all stations and offices, and will configure Met provisioned devices (laptops, tablets, smart phones) to automatically attach to this Wi-Fi when in proximity.
- We will provide guest Wi-Fi within stations and offices, for use by permitted visitors, suppliers and partners. We will use Gov Wi-Fi ⁴, which will allow our visitors to use the same Wi-Fi authentication in a variety of public sector buildings.

⁴ Information about Gov Wi-Fi can be found at www.gov.uk/government/publications/govwifi

- We will deploy a docking and charging infrastructure to support the use of Body Worn Video. This infrastructure will recharge the devices while their content is downloaded and retained within our digital asset system.
- We will put in new network links for our property estate. These links will be modern and run at a higher capacity than our previous links. By having more available bandwidth, we will allow key functionality to work more effectively, including Wi-Fi, internet traffic, video streaming, body worn video, uploads and general application use.
- We are implementing new secure external gateways to handle the traffic that will be generated by our next generation of technology services.
- We commit to review our internet access policies and look to follow the examples adopted by central government as a result of the Government Digital Service reforms. Our officers and staff will be able to access the websites that they need to do their job.
- We will put in new mobile infrastructure allowing secure email services on personal smart phones. We will also upgrade our existing mobile servers so that a wider range of Met smart phones will be supported to all the very latest standards.
- We will link our work in infrastructure to our work on design patterns. New build and refurbishments of stations and offices will be equipped with the right infrastructure from the start, following agreed templated technology patterns.
- To support our increasingly mobile work force we will move from a building centric to a user centric support model. At large sites we will provide an on-site support with facilities such as a 'tech bar' one-stop shop to resolve user problems.
- We will improve the management information associated with the provision of services we provide to end users, including incident management. We will support users to self-serve, for example by allowing them to track the status of incidents.

Future ambition

As the Met increasingly exploits audio, video, still image and other complex content types (as well as data from digital maps and connected devices) we will generally strengthen our infrastructure. Networks, both wired and wireless, will need greater capacity and resilience to handle the very large amounts of data generated by these technologies and we will need to design simple, integrated platforms that will allow us to retain and provide reliable access to this content. We will also set enabling standards for system design, using and deploying Application Programming Interfaces (APIs) wherever possible to make the best use of our data and increase agility.

As the cloud service market matures, we expect to exploit the further commoditisation of services available to continue to drive down costs. As a result, we will design in flexibility for our future ambitions. We will ensure that contracts are not longer than they need to be and that we have a clear exit route and data migration plan in place for all services.

Delivering the vision

These infrastructure improvements will contribute to the Met's drive to reduce unit costs both in technology infrastructure and in estate.

Technology Rationalisation

The drive to deliver technology solutions in support of the Met's desire for new and enhanced business capabilities will sit alongside an imperative to reduce the cost and complexity of the existing estate.

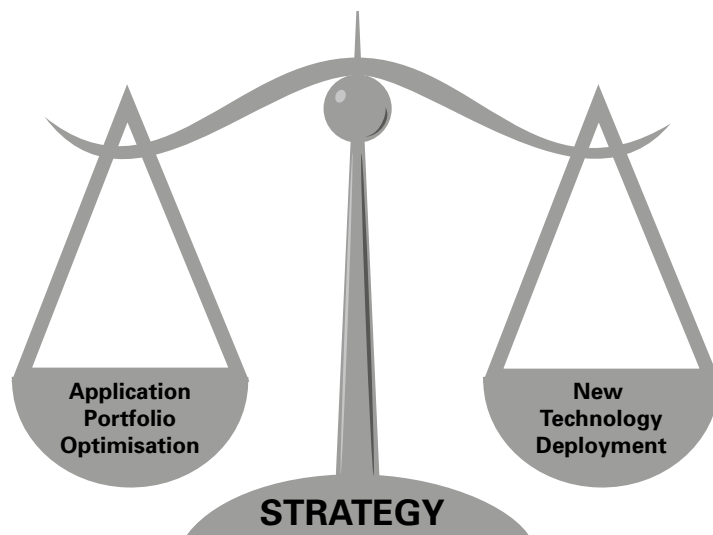


Figure 2 – Balancing technology investment

A comprehensive technology optimisation process will be applied to control this simplification:

- We will analyse the existing application portfolio and assess against the Met's key business capabilities, technology principles and architectural standards.
- We will use the data produced to identify applications to be decommissioned and to help shape new technology solutions.
- We will structure the set of applications for decommissioning into a rationalisation portfolio which can be sustained in parallel with the programme of new development.
- We will work towards reducing the number of applications on our estate, which will drive down costs and reduce the complexity of application support and maintenance.
- Where possible we will use standardised, off the shelf applications, which will reduce development cost and risk, and speed up delivery.

We understand that to fully achieve optimal utilisation of technology, the wider Met business will have an important part to play. There are three key areas of challenge:

- There is a strong case for standardising applications to reduce costs and increase ease of support. This will require the agreement from our business customers that creating bespoke systems or customising existing systems is less desirable than business process change.
- Strategic solutions set out in our Architecture Roadmap may take a longer time than tactical individual projects to deliver and implement because of their complexity and scope. This requires business agreement that a future state built around strategic solutions is the desirable end state.
- Many of the demands on Digital Policing come from new requests for work. If we are to control our IT estate costs and ensure successful support and delivery, we will need to prioritise these requests. We will need to work with the business to take hard decisions in this area. We will do this with the One Met Model team.



Part Two: **Digital Policing**

How technology will be delivered

Leadership

Digital Policing has a new permanent Senior Management team, which is committed to transforming the way technology is delivered. It has set out some key principles:

- We will lead a diverse workforce with transparency and fairness.
- All our people will have the opportunity to help shape the future of Digital Policing.
- We will set out a clear vision and key objectives, and ensure that we communicate them to all staff.
- Our staff will feel valued and understand the importance of the work they do, and how they contribute to the success of the Met.

Approach

Making successful change

To be effective, the strategy must be realistic and readily applicable both across the portfolio and within individual projects. Digital Policing will utilise previous investments and progress, to reduce implementation risks and shorten the time needed to deploy solutions. We will adopt principles used by our public sector colleagues and apply standards commonly employed by those implementing digital technology. We will put in place sufficient, integrated governance to ensure that the strategy is being followed without imposing burdensome and unnecessary constraints.

Relentless customer focus

Digital Policing will put the end user at the heart of our work, balancing the need for standardisation with the needs of individual user groups. When building or procuring new technology, we will ensure that we have a thorough understanding of user needs and work with all stakeholders throughout the technology lifecycle. Our projects will be reviewed for user focus and we will ensure that our products are intuitive, easy to use and reliable. For external digital services, we will engage with members of the public so that our services can be readily accessed.

Digital Policing will establish a regular user forum where we will present plans and showcase new technologies. We will listen to user feedback and make changes accordingly. We will regularly ask our users what they think, through surveys and face-to-face events. We will always respond to comments and feedback in a timely and respectful manner. Where our users have particular needs, we will do our very best to meet these needs.

We will work with the One Met Model Business Change team and with our end users, creating a consistent Digital Policing look and feel for all communications. We will ensure our users are properly trained and given the guidance and support they need to succeed.

Enterprise Architecture

The purpose of Enterprise Architecture is to optimise an organisation's operations (processes and supporting technology) into an integrated environment that supports delivery of the business strategy and is responsive to change. Enterprise Architecture is a function of Digital Policing.

Enterprise Architecture responsibilities

- Ensure alignment of strategic needs with technology delivery.
- Establish effective governance and controls.
- Improve Digital Policing flexibility and agility through standardisation.
- Reduce project delivery risks.
- Promote clarity, consistency and re-use in technology delivery.

Governance

We have defined technical standards and a governance process to ensure project compliance to our strategy within the Service Integration and Management framework. We will further develop our project governance to improve the agility of project delivery.

We will work with partners such as the National Police Technology Council, the Police ICT Company and the Home Office to ensure our programmes and projects are aligned with the wider police and public sector. We will also share standards with these organisations where possible.

Project approval

We are working with the One Met Model to apply programme level strategic cases to our work (halving the number of steps required at project level) to improve our responsiveness to change whilst maintaining the required rigour. We are working with our partners to reduce the time it takes to contract with them for new work, introducing standards for requirements and Service Level Agreements for partners to provide quotations.

Working with our stakeholders we will put in place effective control via the One Met Model 'front door' for new ideas (before they become a project) which will enable the organisation to 'do the right things' and 'do things right'. This front door will control the pipeline of new initiatives, ensuring the delivery of change is fully integrated, the dependencies are understood and there is sufficient capability and capacity within the Met to deliver the change.

Architectural Governance

Digital Policing Technology Council

The Council ensures delivery by seeking compliance with defined principles and standards. These standards apply to all technology implementations, including those managed by our Service Integration and Management partners. The Council sits fortnightly and is chaired by the Head of Enterprise Architecture. It reviews and ratifies service and solution designs, manages standards and commissions architecture deliverables before they are used across the technology landscape. All Architectural Working Group decisions are ratified by the Council in its role as Technical Design Authority.

Architecture Working Group (AWG)

This group assures low-level architecture designs and ensures compliance with policies and standards as defined by the Technology Council. Where the Group recognises that a standard is needed, it can request that the Council commissions work to create one. Where the Group proposes a design which is not compliant with Met policy and standards, a formal exemption must be sought from the Council.

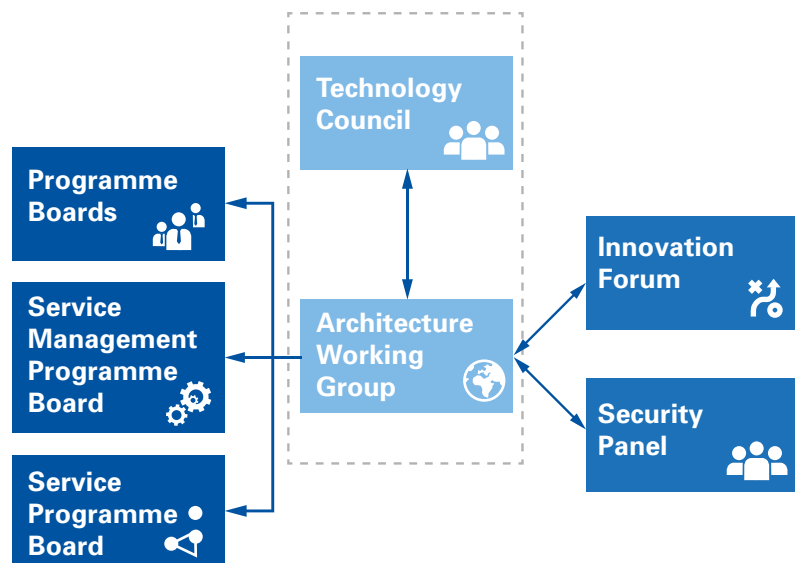


Figure 3 - Governance Structures

Innovation intelligently applied

The Met recognises there is a need to respond quickly to emerging requirements and, where appropriate, we need to stay current with the technology we use. We will put in place an innovation function, which will focus on horizon scanning and bring the best of new technologies into the Met estate. This will be our focus for new ideas, new systems and new ways of working.

To make this happen we will undertake the following:

- Further enhance the Innovation Forum, which will act as a showcase for the best ideas from our suppliers and partners.
- Actively participate in cross-government and cross-police communities so that we can adopt best practice.
- Setup an innovation fund to allow small, rapid piloting of key technology and to allow exploration of new ideas.
- Focus on those innovations most likely to have a demonstrable impact on front line policing or deliver a significant cost reduction.
- Foster a culture of innovation and encourage our officers and staff to share ideas that may lead to improvement.
- Establish a Strategy team who are responsible for ensuring the strategy meets stated Met goals.
- Ensure that innovation complies with the One Met Model 'front door process' ahead of full implementation.

Officer User Group

As we support the Met in helping to make London the safest global city, our motivation is to give police officers and staff technology that is easy to use, reliable and really does help them to better serve the public. To keep us true to this commitment, we will establish an Officer User Group that will help us better understand requirements, shape technology solutions and plan how best to introduce change with the least operational disruption and the most benefit.

Financial Management

Clear accountability and reporting

Digital Policing will further enhance the financial reporting that we do. We will work towards making cost information more transparent and easier to benchmark. We will undertake the following:

- Make it clear what our key budgetary commitments are and ensure these are communicated to our stakeholders.
- Manage expenditure across Digital Policing and continue with cost reduction and cost control as a key criterion for decision making.
- Produce timely and accurate reports with useful information such as unit costs, ultimately including costs per user and per user type.
- Continue to track supplier contracts, working with the Met's Commercial teams to build a new IT contracts register.

Balancing spending commitments

The Met has an important list of upcoming technology initiatives that will deliver business value and help policing on the front line. At the same time, Digital Policing recognises that we have ongoing financial commitments.

To ensure that we can build a financially sustainable technology infrastructure we will ensure that all project and programme business cases include funding for both future ongoing support costs and the costs of decommissioning legacy systems.

We will work to balance our expenditure on maintenance against our spending on new systems and technology. We will have a technology roadmap for legacy and future hardware and software, so that we know when our technology will require expenditure. We will use this to ensure we have a sustainable replacement budget for the Met's existing technology, whether it needs updating, replacing or enhancing.

People and Structure

In order to meet the demands of the business and technology strategy, Digital Policing has transformed its operating model to:

- improve value for money of digital services;
- bring technology innovation to transform policing services; and
- increase capacity to support the delivery of digital services.

People

Underpinning the delivery model are the digital skills and capabilities of our people. Over the past 18 months, Digital Policing has gone through a transformative change with an impact on staff who have seen changes to their roles and ways of working.

Digital Policing delivers through its people and we need a clear people strategy to help us attract, develop and retain the right people.

The objectives of the people strategy are as follows:

- To reduce the reliance on contractors.
- To support the IT professionalism of our staff.
- To create a productive work environment that is recognised externally for the delivery of digital services that impact on the policing strategy for the Met.

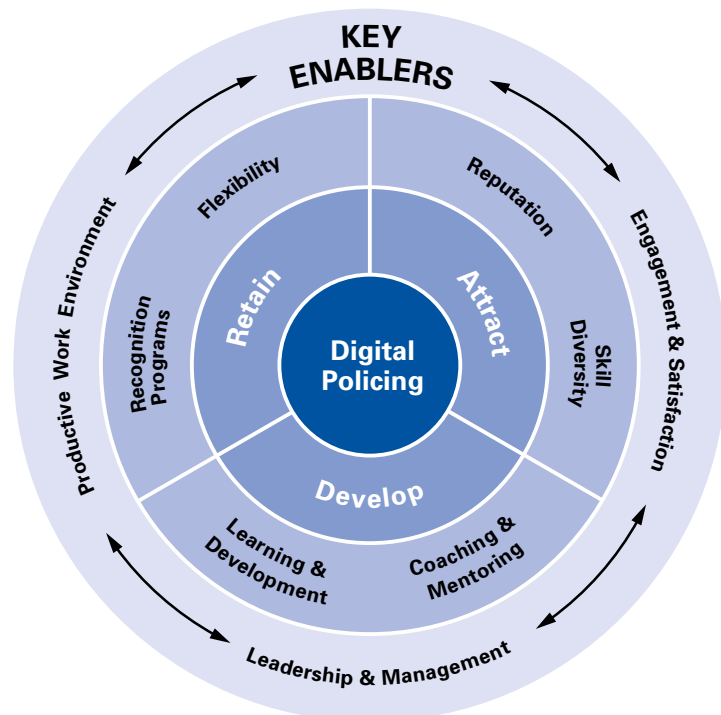


Figure 4 – People strategy

Attract

We must focus on recruiting the right staff, for the right work at the right time. This involves ensuring that we have the correct balance between generalist and specialist skill sets and experience within Digital Policing. We need to ensure that we have the necessary skills to challenge our suppliers to deliver the very best.

Develop

To achieve our strategic aims and respond effectively to changes within Digital Policing and the wider Met, we must be committed to the continuous development of our people. We want to maximise the potential of staff, this includes ensuring that they have the opportunity and support to achieve their career ambitions.

Retain

We want to create an environment in which our staff can grow, succeed and be rewarded for their overall contribution to the success of Digital Policing and the wider Met.

Attract, Develop and Retain Initiatives

We will adopt a broad range of initiatives aimed at attracting, developing and retaining staff. Here are some key ones that have been identified for rapid implementation.

1 Mentoring, Shadowing and Reverse Mentoring	2 Professional Training
3 Skills Audit for Targeted Support	4 Defined Career Paths and Talent Management
5 Graduate Programme and Apprenticeships	6 Reviewed Operating and Reward Structure
7 Professional Body Membership	8 Ad-Hoc Development Events e.g. Digital lunches
9 Working with Industry Experts	10 Secondments and Loans

Figure 5 – People initiatives

Further information on how Digital Policing will carry out these initiatives is contained in the Digital Policing people strategy.

Organisation Structures

Digital Policing is made up of three functions: Business Engagement and Technology; Solution Delivery; and Service Delivery; containing permanent and interim staff, partners and suppliers. The model comprises a business-led Intelligent Client Function (ICF) working in collaboration with a number of partners and suppliers to deliver the portfolio of digital services to the Met.

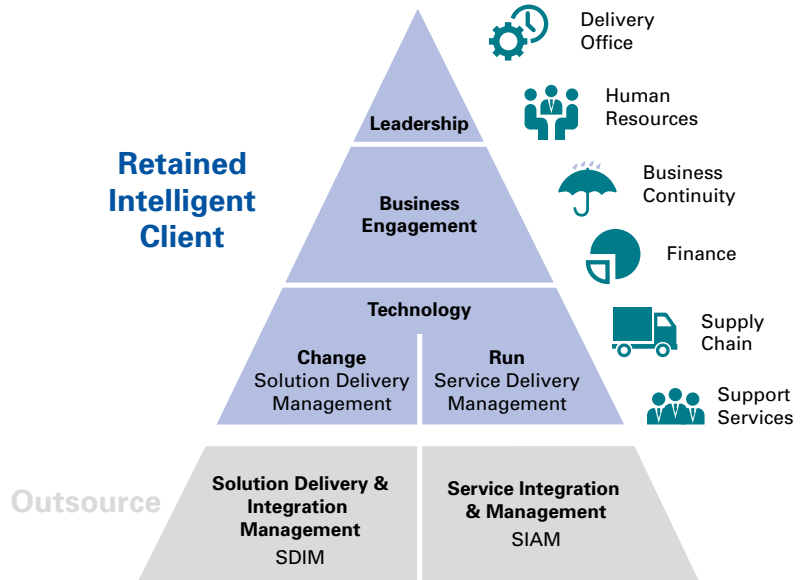


Figure 6 – Delivery model

Business engagement and technology

- The primary interface between the Met's operational teams and Digital Policing, acting as the key business partner to gather, communicate and evolve technology requirements.
- Develops the Digital Policing strategy.
- Creates architectures and standards.
- Provides a gateway for technology investment.
- Innovation and horizon scanning.

Solution delivery

The solution delivery function comprises the retained core of people who manage the interface between Digital Policing and the outsourced provision of application development. Specific responsibilities include the:

- development of technical strategy;
- establishment of technology blueprints and standards; and
- management of outsourced solution delivery.

Service delivery

The service delivery function comprises the remaining core of staff managing the interface between Digital Policing and outsourced service integration. Responsibilities include:

- managing the execution of major [technology enabled] change;
- managing outsourced service delivery; and
- managing service delivery (for non-SIAM services).

Principles, Patterns and Standards

Principles

We have defined a set of principles that will guide the forward development of Digital Policing. By adhering to these principles, the Met can ensure consistency in approach and that technology is delivered to a common strategic direction. Some key principles are listed below, with full listings to be found in the Met Enterprise Architecture Repository:

- Technology is implemented to Policing, Government and open industry standards, employing best practice.
- We will select solutions and technologies where a 'healthy' competitive market exists, where 'choice' and flexible solution options are readily available in the market.
- Changes to application and technology landscape are only made in response to business needs except for cases of technical obsolescence.
- We will assure continuity for enterprise operations.
- Applications are intuitive and easy to use.
- We will open up data where appropriate, and continue to open up Met services internally and externally through the use of APIs.
- Applications will be built with 'defence in depth' employing different security technologies and techniques. This will move us to a position where we can adopt a 'security as an enabler' principle.
- We will work with partners from the National Cyber Security Centre to continually improve security.
- We will adopt a 'cloud first' principle and use public cloud offerings whenever possible.
- We will reduce the number of suppliers and consolidate solutions.

- In the circumstances where we need our own infrastructure, we will use mainstream commodity hardware and software products, leveraging common standardised virtualisation techniques.
- Where appropriate, we will re-use existing police, government or other available public sector common platforms, such as those provided by the Government Digital Service, the Home Office or the Police ICT Company.

Key solution design patterns

We have defined a catalogue of reusable patterns. Patterns are technical or operational designs that describe repeatable solutions to specific requirements. They are defined in generic terms so that they can be applied in a multitude of situations that share the same underlying characteristics. These patterns will allow projects to be designed to provide consistent services and will accelerate the design and delivery of the projects through reuse of implementation elements and common services, where appropriate.

Our strategy is to increase the number of reusable patterns in the catalogue by harvesting from projects.

Canonical Data Model

Canonical Data Models greatly simplify the exchange of data between different systems by providing a common data structure. This approach will be of benefit in Information Driven Policing.

Adapters

Where systems have different interface formats, adapters allow them to communicate via a standard mechanism, akin to an adapter cable. This pattern will be of benefit in Information Driven Policing.

Publish/subscribe

This operational pattern allows organisations to flexibly receive notifications about events of interest to them. It will be of great benefit in exchanging event and incident data between first responders, within the context of Information Driven Policing.

Infrastructure virtualisation

Under server virtualisation, multiple systems can share a single physical resource and large systems can utilise multiple physical resources. This pattern is critical to the delivery of a Durable Infrastructure.

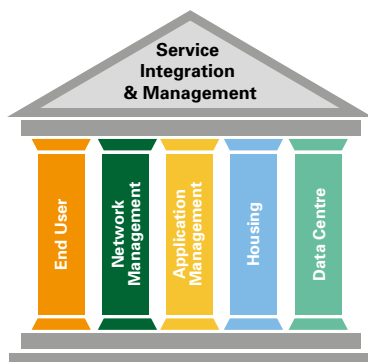
Standards

Standards ensure that technology solutions are built on a solid basis of industry and partner best practice and thereby assure that they are viable and fit for purpose. Adherence to standards enables simpler integrations with our partners and assures that the security and resilience of solutions is at the forefront of design activity. Our standards are managed by the Met Enterprise Architecture practice under the jurisdiction of the Technology Council:

- Infrastructure Standards, to assure resilience.
- Information Standards, to improve information quality.
- End-User Standards, to drive app ease of use.
- Security Standards, to assure protection of the Met's assets.
- National/Partner Standards, to facilitate integration.

Our information strategy and principles are set by the Information Assurance Group.

Sourcing



The Met has moved its key technology services to new contracts as part of a Service Integration and Management (SIAM) approach. This approach provides a layered structure for the delivery of services. At the top layer, we have a single supplier acting as a service integrator and they have overarching responsibility for groups of ICT services. These groups of services are provided by different suppliers, but all are managed throughout by the service integrator.

We will look to re-use existing public sector frameworks and will work with the Met procurement experts to leverage procurement expertise. We will use the government digital marketplace and recognise its important role in public sector technology procurement.

We have also identified the need for a group of suppliers with a proven record of delivery in policing and with the ability to enter longer term arrangements than are possible via the digital marketplace. We will put in place a framework called the Solution Provider Framework to address this.

Using these contractual frameworks we can benefit from cost savings achieved through wider public sector buying power and economies of scale. We should also be able to reduce the duration of our procurements.

With our existing application estate we will continue a rationalisation approach to software and anticipate having fewer suppliers in the future as a result. This will reduce the management overhead involved with contracts, sourcing and drive efficiencies from reduced duplication. This rationalisation is underway and is expected to continue throughout 2017.

Reporting and Metrics

A successful technology strategy closely and directly supports an organisation in realising its overall strategy. It establishes a direction which we will adjust based on external factors (for example legislation or political change), implementation challenges and the monitoring of our progress. Monitoring will be based on three perspectives, as follows:

1. How we are delivering technology with reference to business and technology plans.
2. The progress that is being made in achieving technology objectives.
3. The operational effectiveness of our technology solutions.

We will look to benchmark with other police forces, public sector organisations and organisations of a similar size. We will use this information to inform our technology and spending decisions and to drive best practice.

To ensure that we will achieve this success, we will identify a number of metrics aligned to each of the business capabilities that technology will support. These metrics will establish a baseline, guide Digital Policing, and motivate continual improvement. They also allow Digital Policing to demonstrate delivery against agreed standards. Sample metrics are listed below.

Metrics

Digital Engagement

- Delivering according to the programme plans, post-full business case.
- Transactions achievable digitally.
- Transactions carried out by the public digitally.

Digital Police

- Delivering according to the plan.
- Rollout of digital devices to officers.
- Reduction in administrative (back at base) hours.

Information Driven Policing

- Systems accessed for person searches.
- Compliance with the principles of management of police information.

Durable Infrastructure

- Decommissioned systems.
- Operational system availability.
- Incident and problem trends on the estate.
- Number of obsolete applications.
- Cost per user.

Summary

Key Messages

- Digital Policing exists to support the Met in meeting its objectives to serve the public. This strategy sets out the approach that Digital Policing will take regarding technology.
- Information is the lifeblood of a modern police service. Digital Policing will make a significant investment in understanding our information and using this understanding to better capture, manage, utilise and distribute this information.
- Digital technology offers exciting opportunities to help officers be more responsive, effective and efficient. We will deploy new technologies as we identify the benefits that they can realise.
- It is important our technology remains right for our customers. To this end, we will continually innovate and look to deploy new technologies that meet specific business needs.
- The Met continues to face financial and budget constraints. Digital Policing will work within these constraints and work with operational colleagues to make key decisions on expenditure. Operational units will need to own and drive these decisions, and support Digital Policing to do more with the resources available.

Taking the Strategy Forward

- This Digital Policing strategy will be translated into an annual business plan for Digital Policing. Producing annual business plans allow us to communicate Digital Policing's long-term strategic aims whilst still being responsive to change. The purpose of the business plan is to deliver the concepts set out in this Strategy.
- There will be strategy roadshows that communicate the Strategy to a wider Met audience and to our key stakeholders.
- Key pieces of work will either become projects or be assigned to teams to conduct as part of business as usual. Owners will be appointed for work and there will be clear accountability for delivery.
- Sub-strategies will be produced that fit together with the Digital Policing Strategy. They will cover emerging areas of Digital Strategy in more detail. These will be released over the period 2017 – 2018.
- Once approved, the Strategy will be owned by the Digital Policing Board and managed on an ongoing basis by the Strategy and Innovation team with the first full review in December 2017.

Appendix

Appendix A: Personas and User Stories

In this section, we outline the way in which the lives of our customers will be affected, for the better, with the introduction of the technology outlined above. Below are technology personas which have been created to illustrate the impact of new technology being delivered by the Met. These have been based on wider One Met Model work and represent a technology-based snapshot.



Cycle commuter

Alex has been cycling to work for the last year, from home in Stratford to her company's office in Clerkenwell. She was recently knocked off her bike, fortunately only suffering a few bruises and some scuffed paintwork. What was worse was that the van driver seemed to do it deliberately and drove off after swearing at her. The video from her helmet cam didn't capture the van's number plate but a fellow cyclist did. Alex took a few pictures of her bike and her arm.

In future

- Alex will be able to record details of the incident using a simple, flexible, easy to use web page that she will be able to access quickly on the Met web site.
- The page will automatically capture her location (if she wishes) and allow Alex to attach photos and videos.
- Alex will also be able to upload video of witnesses giving their names and talking about the incident, as they saw it.
- Alex will be able to view an alert on her phone whenever there's a significant update of the case.
- Alex will be able to add other evidence to the case as it arises, for example her doctor's letter stating that the bruise was actually a minor fracture.



Officer, Territorial Policing

Joshua has been a Police Constable in Camden for the past seven years.

Joshua generally drives a patrol car to provide a visible presence in the area and to attend incidents quickly.

Joshua needs

- Radio Communications.
- In-Vehicle Access.
- Custody System.
- Crime Reporting System.

In future

- Joshua will have a new car terminal with an easy to use touch interface and modern, real time mapping software in addition to Met systems access.
- Joshua will have a service radio, which is secure and has emergency services voice communication.
- The number plate recognition app on Joshua's car terminal will automatically detect stolen and uninsured vehicles and link to the National computer to identify where drivers or owners may be linked to a crime.
- If Joshua has to leave his car to apprehend a suspect, he can activate his camera to record details of the arrest and any activity that will be useful as evidence. This evidence will be uploaded when Joshua gets back to his car.
- The station computer will be faster and easier to use than at present, but Joshua will be able to do most things using his service mobile and tablet, going to the station much less frequently.



Officer, Roads and Transport Policing

Jane is a Police Constable working in Roads and Transport Policing Command. Jane has worked at the Met for 11 years. Jane would love to work with Digital Policing to improve the systems so that they help her and her fellow officers to be more effective.

Jane needs

- Police National Computer (PNC).
- Crime Reporting System.
- Digital Asset Management System.
- Email.

In future

- Jane will use Office 365 email to contact colleagues, partners and the public.
- A new National system will give Jane accurate and more powerful facilities to search for details about people of interest.
- Jane will be able to open, progress and track investigations in a single, modern system integrated with public web submissions, custody and forensics.
- Innovative, new technologies can be quickly piloted by local units to see whether they're effective. If they are effective, Jane and her colleagues will be able to use the technologies safe in the knowledge that they are secure.



Detective, Murder Investigation team

Simon is a Detective Sergeant working in Homicide and Serious Crime. He has had quite a few long running, complex cases, giving him a slightly different perspective on Met systems and technology.

Simon needs

- Searches on people, places and events.
- Photo library of suspects.
- Support in intelligence development.
- Unconstrained Internet access.
- Crime recording.
- Email and secure sharing.

In future

- Simon will use Office 365 to securely collaborate with colleagues and others that may have information to support his investigation.
- Throughout his investigation, Simon will be able to use MetSearch to find, in one place, all information known to the Met about suspects and other people of interest.
- As well as accessing records, Simon will be able to track the movements of vehicles associated with his suspects and track related mobile phones.
- Simon will be able to show witnesses a range of photos and videos taken of suspects in custody, interacting with officers and submitted on items such as licence applications.
- Simon will be automatically alerted when another investigation may be related to his, by virtue of a common suspect or possessions (eg mobile phone numbers).
- When Simon returns to a cold case, he will find all of the details that he had compiled as well as information about his suspects (linked via their photo or fingerprints), arising in the intervening period.



Digital Forensics, Forensic Services

Matthew is a digital specialist working in Forensic Services. He supports investigations by extracting evidence from various digital devices. He also uses this evidence to identify individuals associated with crimes.

Matthew needs

- Crime recording.
- Case management.
- Crime intelligence details.
- Digital asset management.
- Specialist digital devices.
- Specialist image analysis software.

In future

- Matthew will be able to more effectively coordinate his work with that of the officers that he's supporting, such as being notified when a case has been suspended.
- An integrated set of tools will allow Matthew to ingest a range of digital media and analyse this content along with images loaded by investigating officers at police station kiosks.
- When helpful to an investigation, Matthew will be able to colocate with officers while retaining the ability to work effectively, having full access to his case management and digital asset systems.
- Matthew will be able to search multiple databases to identify potential suspects and victims, based on biometrics and mobile phone records.
- Innovative, new technologies (such as rapid DNA analysis) can be quickly piloted to see whether they're effective. If they are effective, Matthew and his colleagues will be able to quickly rollout the technologies, safe in the knowledge that they are integrated and secure.

Appendix B: Current Transformation Journey

Introduction

Work to realise this Digital Policing strategy is well underway and we are fully aligned to the One Met Model. Our challenge is to deliver a beneficial set of technology solutions (at different stages of development) in a manner that can be effectively received and utilised within the Met. The Met Programme Portfolio has structured our various technology projects into a cohesive set of business-led programmes determined by four areas of delivery focus. Digital Policing is supporting this business transformation embodied in the One Met Model portfolio.

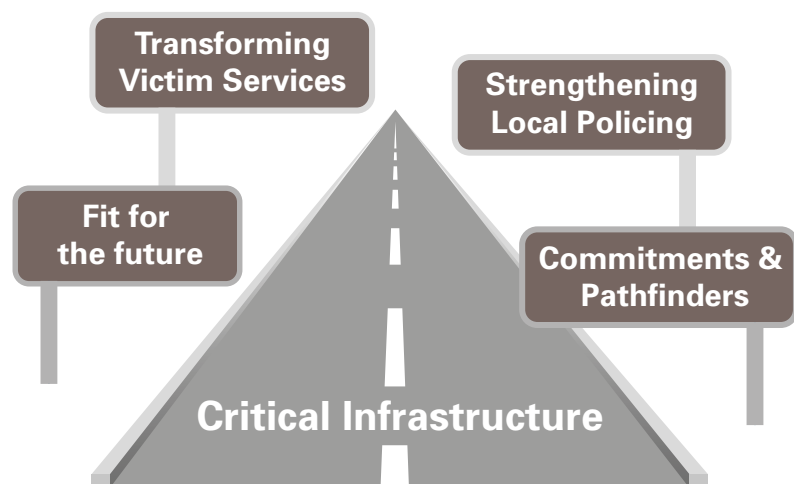


Figure 7 - Portfolio Delivery

Planned technology

These major organisational change programmes have a significant, planned technology element.

Programme 1 – Improving public access and first contact

Here we will develop the ability to interact digitally with the public; using social media and online crime reporting. We will make use of digital technology to send corporate and local messages out to Londoners:

- Responsive website.
- Web chat.
- Social media integration.

Programme 2 – Optimising response

This programme will develop facilities to dispatch resources faster, with improved resilience and ability to operate at a lower cost:

- Smart radios (Airwave Radio Replacement).
- Integrated Command and Control System.
- In-vehicle Mobile Application (Search, Mapping, Geo-tagging).

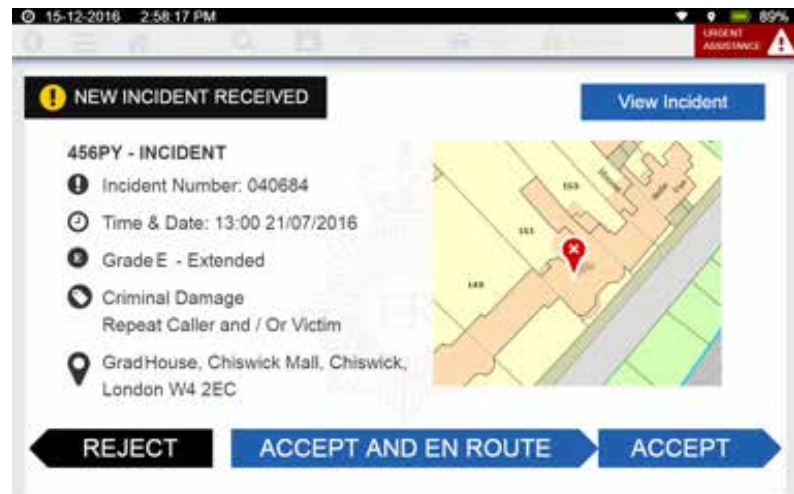


Figure 8 – In-vehicle technology being delivered in Programme 2

Programme 4 – Transforming investigation and prosecution

This programme will provide a central place for all communication, interactions and updates about a reported case, allowing different operational units to utilise common tools. Individual officers will benefit from easy to use systems where they enter data only once while being able to access available intelligence in real time:

- A case management tool that creates a single person record.
- Laboratory Information System.
- A network for managing and searching digital forensic evidence.
- Body Worn Video (Digital Capture).
- Video interviews (Digital Capture).
- Enhanced Automatic Number Plate Recognition (Digital Processing).
- Custody suite and van CCTV (Digital Assets).

Programme 5 – Strengthening our armed policing capability

This programme will expand the existing successful Firearm Management System pilot into a fully deployed system:

- Firearms Management System.

Programme 7 – Smarter working

The Smarter Working programme will enable our frontline officers to remotely access Met systems and email. We will be able to reduce dependency on our physical estate, by providing the ability to access and receive the right information and intelligence anywhere:

- Tablet rollout.
- Wi-Fi connectivity (Corporate, Guest).
- New Met Intranet.

Programme 9 – Improving information management

This programme will help the Met to be information led with an agreed information strategy setting out how we effectively collect and use data. It will lead to improved quality and better managed data:

- Single 'person' view.
- Business intelligence dashboards.
- Predictive analytics solution.

Programme 10 – Enhance Digital Policing

This programme will deliver a range of modern and sustainable devices and services:

- Met Service Bus/API.
- Server virtualisation.

Programme 12 – Creating shared support services

Here, we will deliver a set of shared, back-office services aimed at improving efficiency and driving down costs:

- Robotic automation solution.

Future technology

The following organisational change programmes do not currently have a significant technology element, but could benefit from some of the newer technologies identified within this strategy.

Programme 3 – Strengthening local policing

This programme will develop support for a new model of policing where we despatch resources based on risk assessment, their skills, their availability and their proximity.

Programme 13 – Delivering maximum commercial efficiency

This set of projects will deliver a number of efficiency improvements in areas such as fleet management and catering.

Programme 14 – Counter-terrorism policing change

This programme combines a set of projects bringing about incremental improvements to our counter-terrorism capability.

We will also look to share initiatives, data and information between counter terrorism and Specialist Crime and Operations where appropriate.

Business change programmes

In addition to the technology enabled programmes above, there are another three business change programmes where changes to the technology estates are required, such as reconfiguring of systems or network changes, but where no new solutions are envisaged. These programmes are Streamlined Leadership, Workforce Futures and Transforming the Met Estate.



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