Transforming Forensics
Programme Management Office

BUSINESS CASE – TF FINGERPRINTS
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TRANSFORMING FORENSICS Programme

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Abbreviations and Acronyms

Abbreviation	Meaning
APCC	Association of Police and Crime Commissioners
BDA	Business Design Authority
BI	Business Intelligence
CCC	Chief Constables' Council
CCTV	Closed Circuit Television
CIPFA	Chartered Institute of Public Finance and Accountancy
CMM	Capability Maturity Model
CSE	Crime Scene Examiner
CSI	Crime Scene Investigator
ESMCP	Emergency Services Mobile Communications Programme
ESN	Emergency Services Network
FCN	Forensics Capability Network
FSR	Forensic Science Regulator
FY	Financial Year
HMIC	HM Inspectorate of Constabulary (now HMICFRS)
HMICFRS	HM Inspectorate of Constabulary and Fire and Rescue Services
HOB	Home Office Biometrics
IABS	Immigration and Asylum Biometrics System
ICT	Information and Communications Technology
IDENT1	The UK's central database for holding, searching and comparing biometric information
ISO	International Standards Organisation
JFBS	Joint Forensics and Biometrics Service
MI	Management Information
MOD	Ministry of Defence
MSP	Managing Successful Programmes
NABIS	National Ballistics Intelligence Service
NAO	National Audit Office
S23(1)	*S23(1)*
NDNAD	National DNA Database
NFFNG	National Forensic Framework Next Generation
NGS	Next Generation Sequencing
NLEDS	National Law Enforcement Data Services
NPCC	National Police Chiefs' Council
OBC	Outline Business Case
PCC	Police and Crime Commissioner
PER	Project Evaluation Reviews
PIR	Post Implementation Review

PMO	Programme Management Office
POA	Police Objective Analysis
PTF	Police Transformation Fund
PRTB	Police Reform and Transformation Board
R&D	Research and Development
RAID	Risks, Assumptions, Issues and Dependencies
SIAM	Service Integration and Management
SRO	Senior Responsible Owner
TDA	Technical Design Authority
TF	Transforming Forensics
TFP	Transforming Forensics Programme
TUPE	Transfer of Undertakings (Protection of Employment) Regulations 2006
VFM	Value for money

1. Executive Summary

1.1 Introduction

This document sets out the business case for the Fingerprint Capability project, part of the Transforming Forensics Programme (TF). The Outline Business Case for TF and by extension this component project was approved with caveats by NPCC / CCC for further investigation. This Business Case contains a full evaluation of the options identified to progress the project in line with the wishes of the NPCC / CCC as expressed through the restricted endorsement of the OBC. The objective of this submission is to gain approval for this business case for the Fingerprint Capability as part of the overall TF programme.

1.2 Link to Policing Vision 2025

The approach to the Fingerprint Capability project has been framed in the context of the Policing Vision 2025 which sets a clear direction for the service and the actions and ways of working it envisages delivering its vision, notably "Services will be offered at national, cross force and local level… Functions and processes will have been reviewed with a focus on efficiency and effectiveness with a key enabler being the innovative use of technology. Services will be delivered by a professional workforce equipped with the skills and capabilities necessary for policing in 2025."[1] The Fingerprint Capability project addresses each of these points through a structured plan to use technology to enable a significantly more resilient and flexible fingerprint service organised through a national network, delivering higher levels of service to the frontline and by extension the victims of crime and the wider public. At the same time, the project will review the service to ensure it is efficient and effective, delivered by a trained, dedicated, and professional forensics workforce.

1.3 What is the nature of the proposed investment?

The investment requested through this business case will deliver the transformation of existing fingerprint bureaux services including:

- Consolidation of existing bureaux capability into a smaller number of hubs,
- Ability to radically improve the processes around accreditation attainment and retention
- Delivery of a network to enable sharing of capability and capacity between consolidated hubs
- Establishing the Forensic Capability Network to provide a national approach to Fingerprint service provision.

[1] Paragraph 2.3 http://www.npcc.police.uk/documents/Policing%20Vision.pdf

This funding proposal provides the resourcing to complete the detailed design and planning, manage the change and transition, and procure and implement a Forensics Capability Network (FCN) to enable the integration of bureaux and the sharing of work between them.

1.4 Why is it needed?

The current organisational, operational and funding arrangements are sub-optimal and present a real risk to police forensic service delivery over the next few years:

- Current organisational arrangements lack the scale, speed and capability to support investigations as well as they might, and in some cases regions have also demonstrated a lack of capacity and capability resilience
- Current operations rely on moving physical evidence between crime scenes and remote physical laboratories, with inevitable delays in service and response, and boundaries or differing Fingerprint standard operating procedures (SOPs) between forces often prevent the ability to share workload and even out peaks and troughs in demand
- The current fragmented funding arrangements encourage a disjointed rather than coherent approach to Research and Development (R&D), innovation, and service delivery potentially impeding workload sharing and cooperation
- The current technology infrastructure represents genuine service continuity risk as the technology infrastructure for Ident 1 becomes increasingly hard to support
- Currently all bureaux are individually progressing towards the Accreditation pathway which is both costly, ineffective and is impacting on service provision
- The current fragmented approach to Fingerprint service delivery is misaligned with the national approach advocated by the Government's Forensic Science Strategy and Policing Vision 2025

1.5 What is the best option for delivering the investment?

The main choices which this business case examines is the extent of change ranging from aggregation (the creation of fewer larger hubs to deliver the fingerprint service) and the question of how many hubs is the right number, to integration (the provision of a networked solution to enable data sharing and load balancing) and the provision of a Forensic Capability Network to provide a national governance structure that delivers standardised processes, quality standards and performance to an agreed level representing all participants in TF.

The shortlist of options which have been taken forward for examination in the economic case of this business case are:

- Option 1 – Baseline including HOB readiness and Accreditation
- Option 2a – "9+1 MPS" aggregated Hub configuration without integration retaining independent regional governance
- Option 2b – "9+1 MPS" aggregated Hub configuration with integration, retaining independent regional governance
- Option 2c – "9+1 MPS" aggregated Hub configuration with integration and single-body governance
- Option 3a – "7+1 MPS" aggregated Hub configuration without integration
- Option 3b – "7+1 MPS" aggregated Hub configuration with integration, retaining independent regional governance
- Option 3c – "7+1 MPS" aggregated Hub configuration with integration and single-body governance
- Option 4 – This is the equivalent of the OBC's option 5 and consists of 3 'super-regional' hubs with a unified, fully integrated end-to-end forensic service under single management.

Further detail on these options can be found at paragraph 3.4.

The Net Present Value (NPV) is a key economic measure which demonstrates whether a project or an option delivers a good return on the investment. The figures below refer to costs and benefits delivered over five years.

	Economic costs £m	Economic benefits £m	Net (cost) / benefit £m	Net present value £m	Rank
Option 1: Baseline	-	-	-	-	**8**
Option 2a: 9+1, aggregation	(27.1)	39.9	12.8	10.8	**6**
Option 2b: 9+1 aggregation with integration	(27.1)	46.8	19.8	17.1	**3**
Option 2c: 9+1 aggregation, integration and FCN	(27.1)	56.6	29.6	25.9	**1**
Option 3a: 9+1, aggregation	(27.1)	34.3	7.2	5.5	**7**
Option 3b: 9+1 aggregation with integration	(27.1)	40.6	13.6	11.2	**5**
Option 3c: 9+1 aggregation, integration and FCN	(27.1)	49.9	22.8	19.5	**2**
Option 4: 3 hub, unified, integrated separate service	(27.1)	42.8	15.7	13.0	**4**

Table 1 summary of overall results

Evaluation Results	Economic appraisals	Critical success factors	Non-financial benefits appraisal	Risk appraisal
Option 1: Baseline	8	8	8	7
Option 2a: 9+1, aggregation	6	7	7	6
Option 2b: 9+1 aggregation with integration	3	5	5	4
Option 2c: 9+1 aggregation, integration and FCN	1	2	2	1
Option 3a: 7+1, aggregation	7	6	6	8

Evaluation Results	Economic appraisals	Critical success factors	Non-financial benefits appraisal	Risk appraisal
Option 3b: 7+1 aggregation with integration	5	4	4	5
Option 3c: 7+1 aggregation, integration and FCN	2	1	1	2
Option 4: 3 hub, unified, integrated separate service	4	3	3	3

Based on the economic assessment above option 2c is recommended as the preferred option.

The analysis undertaken as part of the economic assessment shows clearly is that the number of hubs does not have a material impact on costs and benefits providing it is within the 6 – 10 area (excluding MPS); the real differentiator in terms of benefits available for realisation is that the Fingerprint Capability project must deliver aggregation, integration and the Forensic Capability Network to provide cohesive national guidance which will enable benefits to be optimised.

It is also clear that it is better to progress as quickly as possible to start realising benefits, rather than delaying the project in the hope of achieving the optimum size, shape and number of hubs. Every year of delay will cost approximately £6m per year in forgone cashable benefits.

1.6 How much will it cost?

Table 2 Headline costs

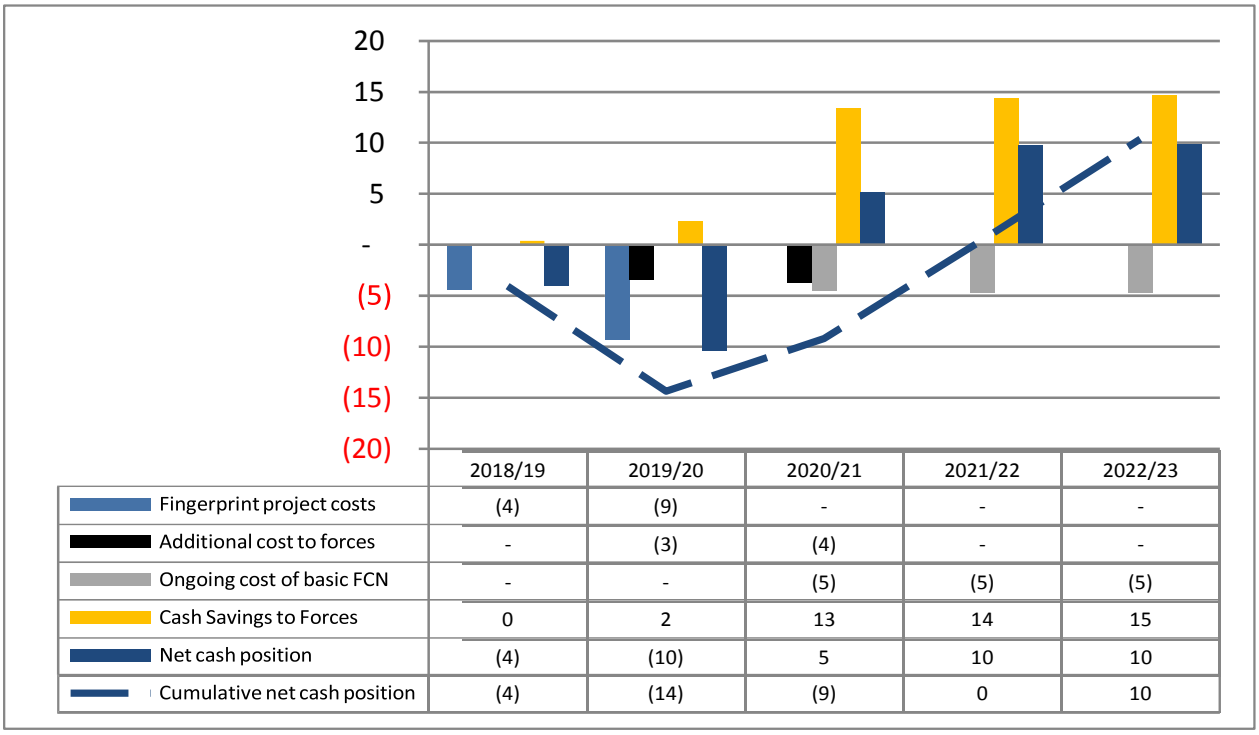
Cost Category	Cost £'000s
Police-led, majority cohort force staffed Delivery Team	£11,231
Base IT Solution	£1,152
Fingerprint IT Solution – equipment costs	£411
Fingerprint IT Solution operating costs	£879
Total cost	**£13,674**

Investment approval is being sought for the total implementation cost of £13.7m over two financial years, 2018/19 and 2019/20. Note these figures do not include VAT and it has been assumed that all VAT will be recoverable.

1.7 Will the project pay back?

The graph below shows how this project pays back in a short period of time, becoming cash positive by 2021.

Figure 1 Project payback



	2018/19	2019/20	2020/21	2021/22	2022/23
Fingerprint project costs	(4)	(9)	-	-	-
Additional cost to forces	-	(3)	(4)	-	-
Ongoing cost of basic FCN	-	-	(5)	(5)	(5)
Cash Savings to Forces	0	2	13	14	15
Net cash position	(4)	(10)	5	10	10
Cumulative net cash position	(4)	(14)	(9)	0	10

The investment delivers a good return through rationalisation of fingerprint processes, enabled by investment in digital technology and processes, it is expected to deliver over £13m p.a. cashable savings by 2020.

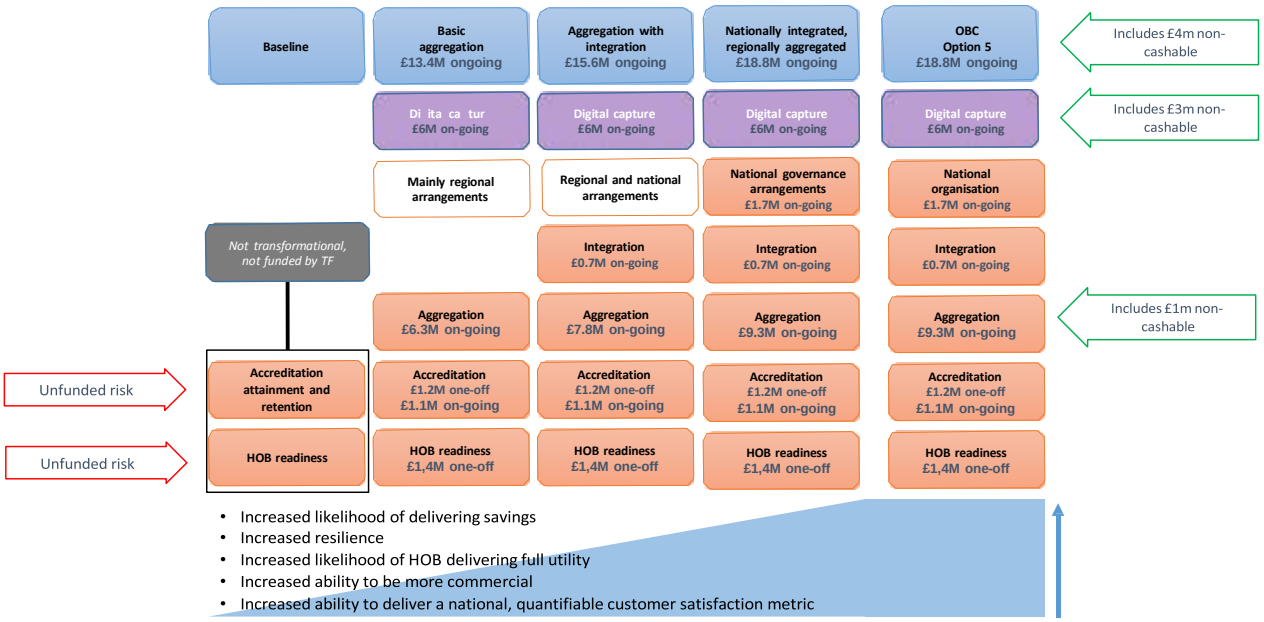
However, the cashable savings, whilst important are only part of the benefits which can be realised through the Fingerprints Capability project. This project is the primary programme vehicle for creating:

- a truly "National Grid" for forensics, enabling levels of resilience and responsiveness hitherto unseen
- levels of professionalism, expertise, confidence and trust, which will not only strengthen the link between communities and policing but will also inspire the skilled and dedicated forensic workforce to deliver ever better outcomes
- a future-proofed national Fingerprint capability with the research and innovation necessary not only to build and maintain Fingerprint services, but to provide the template for other Forensics capabilities to move to a sustainable footing for the long term
- a technical solution that enables the balancing of workload across bureaux, delivering an equitable service to communities with respect to cost and effectiveness
- a scale of transformation that could see UK policing's Fingerprints capabilities regain their position as "world leaders".

In addition to the £13m cashable benefits we anticipate that an additional £4m p.a. of non-cashable efficiency savings will be realised.

The Fingerprint Capability project is the main contributor to the considerable programme benefits outlined in Figure 2 Programme Benefit Summary, accounting for £17.7m cashable and non-cashable benefits by 2021.

Figure 2 Programme Benefit Summary

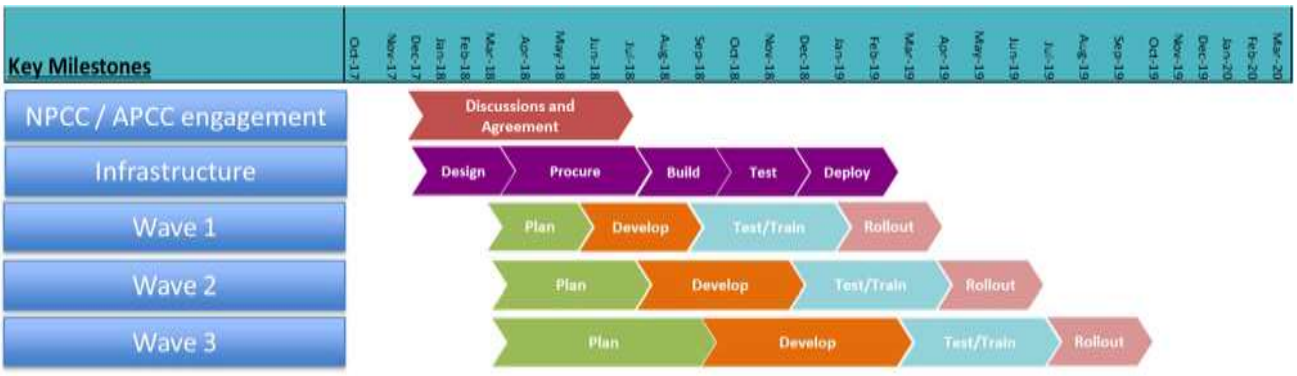


For further information on benefits see paragraph 3.6.3

1.8 When will the project deliver?

The project will deliver in line with the high level plan set out below. It will take a staged approach to manage resources, impact on the business and learn lessons through the process, but all participating forces will be engaged from the beginning, no one will be left behind. The order for implementation will be developed in discussion with the forces to fit their requirements, local plans and readiness level at the time.

Figure 3 High Level project plan



1.9 What are the Governance arrangements for the project?

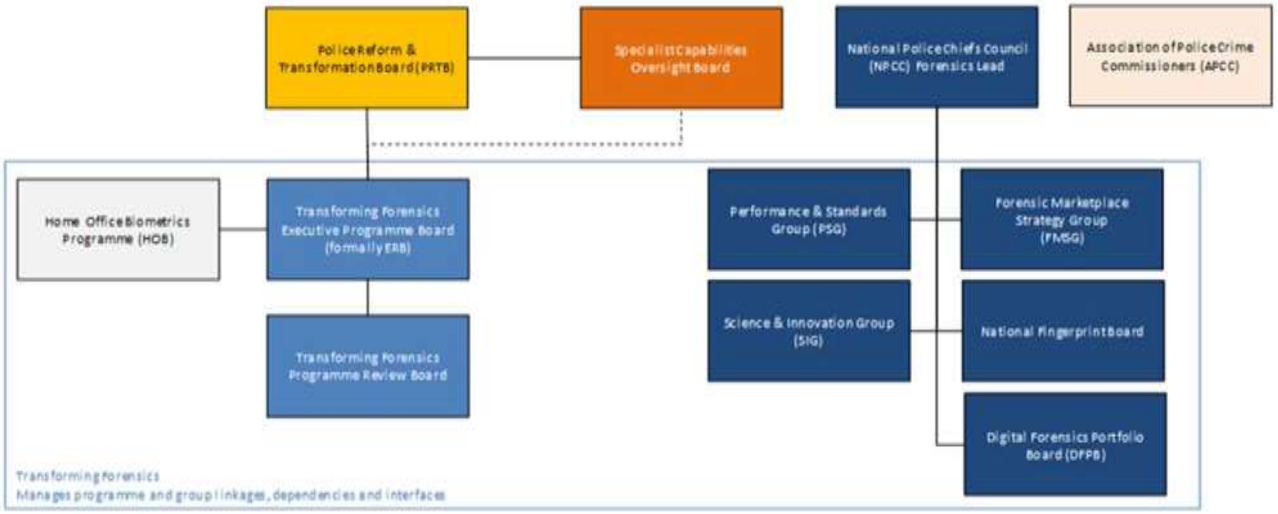
The Fingerprint Capability project is part of the Transforming Forensics Programme which is being delivered through the NPCC Forensic Portfolio and governed by an already established Executive Review Board with Police and Home Office representatives, the APCC, the Forensic Science Regulator and other expert support, including academia.

A Governance framework has been defined and is in place. Executive and Programme boards are already established, and their roles and responsibilities defined. The Executive Board is jointly chaired by Chief Constable Debbie Simpson (the NPCC Lead for Forensics) and PCC Mark Burns-Williamson (the APCC Lead for Forensics). It reports through the Chief Constables' Council and the APCC. It also reports to PRTB in terms of performance against its funding grant.

Key governance roles currently in place include the APCC Sponsor, the Senior Responsible Owner (SRO), Programme Director, Programme Manager, Business Change Managers and the Programme Office. The

multi-disciplinary programme delivery team put in place to support the TF Programme is providing specialist management support in programme delivery, control and technical and business design.

Figure 4 Programme Governance structure



1.10 Is the project dependent on or a key dependency of other programmes?

The Fingerprint Capability project is not dependent on other programmes to progress and deliver its benefits, neither is it a key dependency of other programmes. It will influence, and be influenced by the Home Office Biometric programme, HOB particularly where the two programmes converge at the bureaux. TF and HOB are engaged at the programme level to ensure any emerging dependencies are managed. Similarly, the project plans / timescales of the Emergency Services Mobile Communications Programme (ESMCP) may influence the plans of the Fingerprint Capability project in terms of timing (since availability of the functionality delivered by EMSCP could support, for example, digital transmission of data), however, if EMSCP were to cease to operate as a programme there would be no material effect on this project.

1.11 Recommendation

This business case recommends that approval is given to proceed rapidly with option 2c, aggregating to 9 hubs (plus MPS), developing the network to integrate those hubs and facilitate resilience and flexibility through workload balancing and developing the Forensics Capability Network to provide national leadership and operational coordination across forensics.

2. The Strategic Case

2.1 Introduction

This business case, one of a series of business cases forming part of the broader "Transforming Forensics" Programme, is for the investment of £13.7m to deliver the transformation of existing fingerprint bureau services. This transformation will include the consolidation of existing bureau capability into a smaller number of hubs, an ability to radically improve the processes around accreditation attainment and retention, and the delivery of a network to enable sharing of capability and capacity between consolidated hubs.

This funding provides the resourcing to complete the detailed design and planning, manage the change and transition, support local Forces in delivering the change, and procure and implement the Forensics Capability Network (FCN) to enable the integration of bureaux and the sharing of work between them.

2.1.1 Structure and content of the document

This business case has been prepared using the agreed standards and format for business cases, as set out in HM Treasury "The Green Book (Appraisal and Evaluation in Central Government)".

The approved format is the Five Case Model, which comprises the following key components:

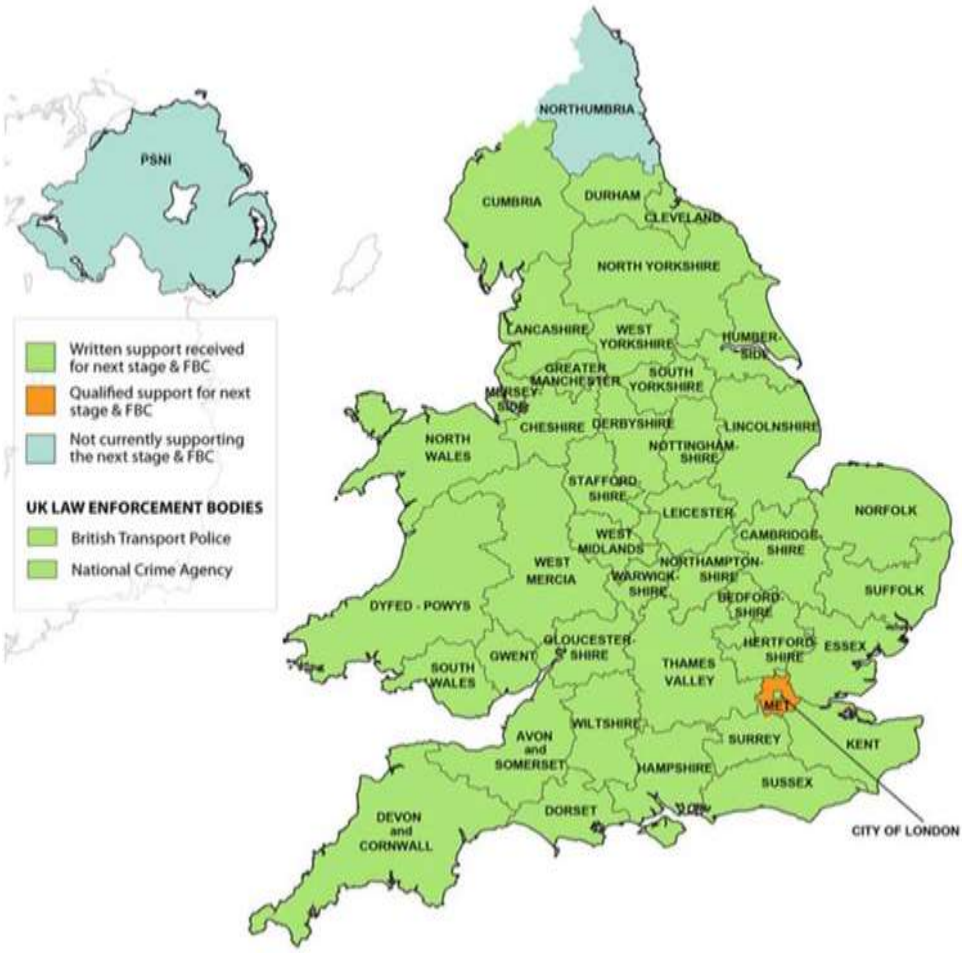
- the strategic case section. This sets out the strategic context and the case for change, together with the supporting investment objectives for the scheme
- the economic case section. This demonstrates that the organisation has selected the choice for investment, which best meets the existing and future needs of the service and optimises value for money (VFM)
- the commercial case section. This outlines the content and structure of the proposed deal / commercial arrangements
- the financial case section. This confirms funding arrangements and affordability and explains any impact on the balance sheets of the participating organisations
- the management case section. This demonstrates that the scheme is achievable and can be delivered successfully to cost, time and quality.

The purpose of this section (the strategic case) is to explain how the scope of the proposed project fits within the existing business strategies of the participating organisations and to demonstrate a compelling case for change, in terms of existing and future operational needs.

2.2 Organisational overview

This business case forms part of the Transforming Forensics Programme (TF), which is being delivered on behalf of the Association of Police and Crime Commissioners (APCC) and the National Police Chiefs' Council (NPCC). TF is one of the four largest police transformation programmes within the Police Reform and Transformation Board portfolio. It operates on an "opt-in" basis and currently has support from 44 of the United Kingdom's policing / law enforcement organisations, as illustrated by the map in Figure 5 TF Cohort Forces.

Figure 5 TF Cohort Forces



2.3 Overarching business strategies

The Transforming Forensics Programme, to which the Fingerprint project belongs, has been carefully designed to support the delivery of the UK Policing Vision 2025 and the Home Office's Forensic Science Strategy March 2016.

The UK Policing Vision 2025 describes a future where:

- The link between communities and the police will continue to form the bedrock of British policing. **Local policing** will be tailored to society's complex and diverse needs – with the delivery of public protection being informed by community priorities and robust evidence-based demand analysis
- **Specialist capabilities** will be better prepared to respond to existing and emerging crime types. Decisions on how capabilities are positioned, structured and deployed will take into account the need to rapidly protect communities and the vulnerable, as well as provide value for money
- The police service will attract and retain a **workforce** of confident professionals able to operate with a high degree of autonomy and accountability and will better reflect its communities

- **Digital policing** will make it easier for the public to make contact with the police wherever they are in the country, enabling us to make better use of digital intelligence and evidence and transfer all material in a digital format to the criminal justice system
- Policing will be agile and outward focused. Police forces and their partners will work together in a consistent manner to enable **joined up business delivery** around policing support services and community safety
- Clear **accountability arrangements** will support policing at local, cross-force and national levels. This will ensure that there is coherence between the oversight of the police reform programme and local policing and crime plans, as well as developing arrangements that recognise the roles of different policing bodies. Police and Crime Commissioners (PCCs) will continue to be at the heart of engaging communities in the reform plans so that the public understand and have confidence in any change.

At the heart of creating this new future is **making transformative change** across the whole of policing with a keen focus upon the public and improving services for them. Central to this is a focus upon **inspiring the people who work in policing and working with them** to create the capabilities, systems and processes that will enable them to provide the first-class services members of the public deserve.

The Home Office's Forensic Science Strategy sets out a vision for a national approach to forensic science with "a clearer system of governance to ensure quality standards and proper ethical oversight, and a cost-effective service that delivers to law enforcement and the Criminal Justice System robust and relevant forensic evidence, and in doing so strengthens public and judicial trust in forensic science."

Drawing together both Policing Vision 2025 and the Home Office's Forensic Science Strategy, t**he Transforming Forensics Vision**, as agreed with the programme's broad range of stakeholders, is:

"To deliver high quality, specialist forensic capabilities in support of the 2025 policing vision to rapidly protect communities and the vulnerable, which is sustainable to meet future threats and demand."

The Transforming Forensics Programme Business Case provides a comprehensive analysis of how the TF Programme, as a whole, supports each of these elements of the future vision.

In the context of this particular project business case, the key elements of alignment are:

The Link between Communities and the Police will continue to be the bedrock of British policing.

The Transforming Forensics programme has been built upon the premise of policing by consent and recognises the need to embed legitimacy, trust and confidence, underpinned by the Code of Ethics, in all it does. Fingerprint analysis is a very powerful capability, trusted by the public and valued as a tool for effective policing. The Fingerprint Capability project will ensure that Fingerprint services are delivered to the highest standards in accordance with the requirement of the Forensic Science Regulator, and remain available to policing at a cost which is sustainable given current financial challenges.

Specialist capabilities will be better prepared to respond to existing and emerging crime types. Decisions on how capabilities are positioned, structured and deployed will take into account the need to rapidly protect communities and the vulnerable, as well as provide value for money.

The Transforming Forensics Programme is designed to provide or enhance a series of specialist capabilities and services that can be accessed by any law enforcement organisation and centre around victims and public protection. The Fingerprint Capability project will provide significant enhancements to specialist Fingerprint capabilities, by creating scale of operations which can sustain such capabilities and by creating a networked capability to facilitate all Forces accessing a specialist capability remotely. By doing so, the project will help law enforcement organisations to make identifications that they are either currently unable to achieve or can only currently achieve in slower time. This will, in turn, enable them to make earlier and more accurately targeted interventions, thereby protecting communities and the vulnerable more effectively.

The police service will attract and retain a workforce of confident professionals.

The ability to analyse and interpret the Fingerprint comparison results, often in very short timescales, requires a highly skilled workforce. The Fingerprint Capability project will see a renewed focus on workforce and talent management within Fingerprints, for three very practical reasons. Firstly, as part of the significant change in landscape that will be driven by the project, through fewer capability hubs and networked hubs, the project and local Forces will need to manage risk by garnering a significant amount of information on the whole workforce to ensure the future landscape is appropriately resourced. Secondly, the drive to achieve accreditation has proven that a skilled, motivated and trained workforce with proven competency and continuous CPD is a pre-requisite for bureaux to achieve accreditation, this priority will ensure a sharper focus on workforce management. Thirdly, the development of the Forensic Capability Network will create a body with the oversight to organise and understand workforce demand at the national level, potentially opening up opportunities for more structured career paths, increase mobility between bureaus and greater levels of upskilling and retraining to meet new demands including other types of forensic capability e.g. digital forensics. In addition, this project, as part of the broader Transforming Forensics Programme, will help create a development programme, aligned to the core values of UK policing that inspires and nurtures current and future staff, and places them within a Professional Services and Codes of Practice Framework by 2020.

Policing will be agile and outward focused. Police forces and their partners will work together in a consistent manner to enable joined up business delivery.

The Transforming Forensics Programme is targeting positive impact across the whole criminal justice system, focused on delivery across the entire supply chain, from crime scene to court. The Fingerprint Capability project will facilitate a continued agile and outward focus by, for example facilitating a smoother transition to new HOB tools and functionality, by supporting the shift to all-digital processes which will make sharing information across the criminal justice system far easier and through the networked capability enable more rapid processing of Fingerprints for any Force at any time.

Clear accountability arrangements that recognise the roles of different policing bodies, coherence in the oversight of the police reform programme and PCCs continuing to be at the heart of engaging communities.

As set out in the Management Case, the Transforming Forensics Programme has set up programme governance arrangements which involve key stakeholders across Law Enforcement, the Crown Prosecution Service (CPS), the Forensic Science Regulator (FSR), Her Majesty's Revenue and Customs (HMRC) and Her Majesty's Courts and Tribunals Service. The Fingerprint Capability Project has been significantly re-shaped to take account of PCC and CCC preferences for a more incremental approach towards the goal of a transformed, unified service, with a greater emphasis on what can tactically be achieved by March 2020. The new phased and adaptable approach recognises and builds upon existing political and physical foundations. The project will continue to engage with all stakeholders and will be accountable to PCCs in delivering change.

2.4 Investment objectives

Supporting both the 2025 UK Policing Vision and the Home Office's Forensic Science Strategy is the TF's own Vision (see 2.3 above), Missions, Objectives, Strategies and Tactics (VMOST).

The programme vision is organised around 4 mission statements, which also serve as overarching investment objectives:

- Investment Objective 1 – Achieving a shared vision and a collaborative approach
- Investment Objective 2 - Creating a sustainable national capability
- Investment Objective 3 - Developing and Inspiring people
- Investment Objective 4 - Ensuring long-term sustainability.

The Fingerprint project has been designed to support each of these investment objectives in the following way.

Investment Objective 1 - Achieving a Shared Vision and a Collaborative Approach

- Design the new fingerprint service operating model **(Fingerprint Capabilities)** through a combination of Business and Technical design options.
- Introduce a phased approach to implementation that tests and measures the benefits of the business case
- Maximise as many cohort forces to Transition onto the new fingerprint capability model – transition plan and approach will be subject to NPCC & APCC approval following FBC submission.

Investment Objective 2 - Creating a Sustainable National Capability

- Design and Implement a more streamlined accreditation framework into the new fingerprint capability model that will improve quality and deliver standardised, integrated processes (SLA's), competency framework and standard role profiles.
- Deliver a transformed governance model that will support the operational service, leadership and co-ordination of the new fingerprint capability model that delivers value for money.
- Ensure the most cost effective delivery of Home Office Biometric Technologies into the new fingerprint service operating model that will include a new matching algorithm, single workflow, new tools/applications and international searching capability with specialist databases (IABS, CT, PRUM) to maximise forensic outcomes to policing. Critically this will support continuity of service from the outgoing biometric system (IDENT 1).
- Develop and implement new "Ways of Working", aligned to Police Vision 2025 and FSR's Code of Conduct.
- Deliver a Management Information and Business Information solution that supports the new fingerprint service delivery and provides information to drive and measure continuous improvement

Investment Objective 3 - Developing and Inspiring People

- Defining role clarity within the fingerprint discipline to enable standardisation nationally.
- Development of career pathways which highlight the progression routes within fingerprints with a consideration of other capabilities and career paths in other forensic disciplines

Investment Objective 4 - Ensuring Long-Term Sustainability

- Create an environment which attracts Research & Development investment opportunities for Fingerprint Capability through an integrated service
- Identify and deliver biometric capability and services to organisations outside of NPCC Policing.

2.5 Existing systems and operational arrangements

There are currently 35 operational Fingerprint Bureaux owned by and providing services to Policing in England and Wales of which some have been long standing and in existence for over 50 years. Their primary function is to process custody fingerprint sets that are enrolled onto the National Fingerprint Database and to compare crime scene fingerprints against the National Fingerprint Database to achieve identification.

Fingerprint Identifications are reported to Police Investigation Teams and such outcomes are usually presented in an evidential format within the criminal justice system. Some Bureaux have been subject of collaboration and are part of a regional model and others operate independently within their home force. Regardless of whether the Bureaux operate regionally or locally, ALL of them function independently to one another. All Bureaux vary in size and are configured differently both from a technical and service design perspective.

2.6 Business need - the case for change in fingerprint bureaux provision

There are 6 major reasons why change is needed.

The first is that current organisational, operational and funding arrangements are sub-optimal.

Fingerprint bureaux currently do excellent and vital work, but quality, performance and productivity vary and too often innovations developed in one force or a small group of collaborating forces are not shared or

adopted more widely. Funding arrangements encourage a fragmented rather than coherent approach to Research and Development (R&D), innovation, and service delivery. This has led to a divergence in approaches and reduced opportunities to exploit the benefits of national capabilities. It has produced a fragmented Fingerprints system with different parts often pulling in different directions without any overarching strategic oversight. It has also resulted in a lack of resilience at both a capacity and capability level in some forces. This presents a real risk to Fingerprint services, not least because it fails to optimise Research and Development (R&D) efforts or investment and also runs the risk of seeing very valuable, albeit less commonly used, forensic science capabilities being lost by becoming economically unviable.

Current services often lack the scale, speed and capability to support investigations as well as they might. Current systems rely heavily upon moving physical evidence between remote crime scenes and bureaux, with inevitable delays in service and response. Force boundaries, differing Fingerprint practices between forces and disjointed funding models often prevent the ability to share workload and even out peaks and troughs in demand particularly in response to critical incidents.

The second is that current organisational, operational and technology infrastructure arrangements present an increasing risk to service continuity through system failures in the short term and system decommissioning in the medium term.

The current technology infrastructure represents genuine service continuity risk. A current assessment of Bureaux across England and Wales indicates that there is a strong possibility of one or more sustaining a significant technical failure as the technology infrastructure for Ident 1 becomes outdated and increasingly hard to support as it nears end of life. Bureaux already report frequent system issues which impact on productivity and system response times which impact workload and customer service.

The only technical common platform the current bureaux share is the current Biometric capability – IDENT 1, for which decommissioning will begin in April 2019, subject to the ability of the users to successfully migrate to the new HOB service. The Home Office Biometric Programme plans to deliver a number of technology solutions to replace the current end of life system.

The third is that current organisational structures and operational arrangements are an impediment to bureaux cost-effectively achieving the standards required by the Forensic Science Regulator.

The bureaux are having to individually progress towards the Accreditation pathway which is both costly and ineffective and is ultimately having a severe impact on service provision (increased backlogs) – it is currently estimated that over half of the bureaux will not achieve the accreditation timeline of October 2018 set by the Forensic Science Regulator. There is significant variation in Standard Operating Procedures, Bureaux Role Profiles and Service level Agreements across the landscape.

Many police forces will struggle to meet current accreditation standards and deadlines or be in a position to afford the resource required to maintain accreditation. This increases the potential for a forensic science quality failure, which could cause a miscarriage of justice and a significant erosion of the public trust and co-operation, upon which UK policing relies.

The fourth is that the opportunities presented by the HOB, ESMCP and Digital Policing programmes, in terms of maximising benefits for forensics, are simply too good to be missed by continuing with a fragmented approach.

HOB alone is investing c. £600 million in delivering updated and improved database systems for fingerprints, DNA and facial recognition. ESMCP is investing c. £1.2 billion in the new Emergency Services Network and between the NPCC's Digital Policing and the HM Courts and Tribunal Service's Common Platform Programmes, over £300 million is being invested in digitising the criminal justice system.

The NPCC Transforming Forensics Programme view this an ideal opportunity to transform the existing Fingerprint Bureaux landscape in readiness to receive the new Home Office Biometric solutions and deliver a streamlined, networked Fingerprint Capability model that delivers long term sustainability and realises the full benefits of next generation biometric services.

By presenting a cohesive view of requirements through the Transforming Forensics Programme, policing has the opportunity to take a joined-up approach, speaking with one voice in influencing the direction of

these other programmes, especially HOB, and working together to ensure that the new capabilities being provided are deployed in a coordinated way and to maximum effect for the benefit of operational policing and the communities it serves.

The fifth is that the current arrangements are unsustainable given the demand now faced by policing and the financial constraints within which it is operating.

Policing is facing huge challenges as it seeks to deal effectively with an unprecedented level and pace of change – new crimes, new ways of committing old crimes, new types of criminals, and increasing demand for digital services to name but a few. Add to this the current financial constraints and pressure on resources and policing is having to work harder than ever to modernise.

Serious and organised crime has generated new threats, such as cyber-crime, while terrorism has become more fragmented and harder to combat. The volume and severity of serious and organised crime, cybercrime and other threats to the UK that have an international dimension are also growing, as criminal and terrorist networks seek to take advantage of globalisation and more services and transactions take place online. Furthermore, even though the overall level of "traditional" crime has until recently been declining, the number of violent and "high harm" crimes, which usually need the most significant forensic science input, has already been increasing for a number of years and continues to do so.

Transforming Forensics, supported by the vast majority of UK police forces, believes that it simply does not make sense for forces to try to meet these challenges or exploit the available opportunities individually.

The sixth is that the current arrangements are out of step with both the UK Policing Vision 2025 and the Government's Forensic Science Strategy.

The Government's Forensic Science Strategy is based upon a national approach to forensic science delivery in the criminal justice system and Policing Vision 2025 states that policing's specialist capabilities will be positioned, structured and deployed in a way that will take into account the need to rapidly protect communities and the vulnerable, as well as provide value for money. The current fragmented and sub-optimal approach is out of step with both these strategic frameworks.

2.7 Proposed business scope, timing and key service requirements

The scope of this project is all operational bureaux supporting forces which opt in to the TF programme cohort, this is currently 44 Forces and non-Force organisations. The proposal is to create and implement a new Fingerprint Capability Network delivery model building on the current bureaux landscape and making full use of the existing skilled and dedicated workforce, estates and facilities. By 2020 the new model will deliver:

- Effective and timely readiness to interface with the new Home Office Biometrics (HOB) programme deliverables
- A new technical solution to facilitate improved communication, data and workload balancing across bureaux and ultimately facilitate a "national grid" for Fingerprints (and other forensics services in the future), enabling new levels of resilience and responsiveness
- Improvements to current accreditation processes due to increased standardisation, which will save money and reduce the risk to CJS outcomes from failure to gain and / or maintain accreditation
- Efficiency improvements, and cost reductions through, for example, workforce, estate and infrastructure rationalisation
- Improved customer service through increased consistency of service availability, quicker turnaround times, enhanced management information and service level agreements.

Exclusions

At this stage the transition of all Tenprint Functionality (currently performed in Bureaux) into the Forensic Information Database Service (FINDS) has not been fully defined or agreed as in scope for this project although the benefits from this transition will be enablers within the fingerprint capability transition.

2.8 Main benefits

Delivering the scope of this project as recommended by this business case will deliver the following high level strategic and operational benefits:

- Improved resilience through a networked "national grid" of bureaux, enabling efficient and effective workload balancing and enhancing the ability to manage surge
- Improved victim satisfaction through more rapid investigations successfully apprehending perpetrators sooner
- Lower risk and cost of accreditation attainment and retention through:
    - Fewer bureaux locations
    - Standardised operating procedures
    - More effective management of workforce skills, training and accreditation
    - Freeing up of forensically aware staff to be retrained to address critical vacancies in other areas such as accreditation or digital forensics
- Enhanced customer service and savings in investigation time through
    - Increased service availability
    - More rapid processing
    - Reduced cross-border complications
    - Standardised real time reporting to policing
- Improved workforce / talent management
    - Greater insight into the workforce
    - Increase focus on skilled, trained, accredited workforce
- Increased revenue from customers outside of NPCC Policing through increased resources to focus on revenue generation
- Increased R&D investment through increased resources, the definition of a common requirement to be addressed
- Lower cost of service provision through:
    - Reduction in the workforce
    - Overhead reduction
    - Procurement savings
    - Lower cost of preparation for HOB readiness / connection to new services

See Appendix 6 Fingerprint Capability Project Benefits Map for the project benefits map.

2.9 Strategic risks

The main business and service risks and associated mitigations are set out in the Table 3 Strategic risks below.

Table 3 Strategic risks

Risk Area	Risk description	Mitigation
Design	The service design cannot deliver the services at the required performance or quality standards which would impact service credibility, CJS outcomes and potentially future participation by Forces	Establish clear performance and quality standards early and test design regularly to ensure compliance, use Pathfinder Forces to test design performance and learn lessons where necessary
Availability risk	The quantum of the service provided is less than that required under SLAs which would impact service credibility, CJS outcomes and potentially future participation by Forces	Establish clear service levels early and test the service to ensure it can be scaled to manage the current and future demand required, use Pathfinder Forces to test design performance and learn lessons where necessary

Risk Area	Risk description	Mitigation
Construction risk	The construction / fitting out of physical assets such as large Hub locations or Data centres is not completed on time, to budget and to specification which would impact go live, delay benefits realisation (savings come later) or increase costs (e.g. extended leases)	To utilise appropriate existing estate wherever possible, ensuring any plan for construction / fitting out of physical assets is planned well, learning lessons from similar experience within cohort Forces that have undertaken a similar exercise already. Ensure there is contingency in budget, timeline and existing estate availability to manage the risk if necessary
Transfer risk	Transferring staff from existing SSUs to new Hub locations is disruptive and protracted which could impact service levels, create back logs and adversely impact current investigations	Plan for transfer disruption by developing an in depth analysis of the current estate, staff profile by residency and proximity to the proposed sites and learning lessons from similar experience within cohort Forces that have undertaken a similar exercise already. Establish, in advance, ways to manage workload – sharing with other Forces where necessary to reduce the impact on the service through, for example, back logs
Demand risk (e.g. through choice to reduce costs, or changing patterns of crime)	Demand for a service does not match the levels planned, projected or assumed, which, if lower demand than expected, impacts on benefits realisation, pricing and business model viability and which, if higher than expected could impact on costs (e.g. overtime), ability to meet demand on time and adversely impact investigations	Conduct thorough analysis of demand, trends, in crime rates and demand for FP support. Where possible learn lessons from the UK market for FSPs on pricing and elasticity of demand and remain cognisant of this in designing a charging model
Funding risk	Where project delays or changes in scope occur as a result of the availability of funding.	Ensure funding is clearly committed from all sources – Forces and PRTB etc.
Regulatory risk	Regulatory framework requires actions which do not fit with the project plan, which could impact delivery timing or cost	Work with the Forensic Science Regulator to ensure the project is working with the regulatory framework and ensure good dialogue would alert the project to any changes or new demands which would impact project delivery
Maintenance cost risk	The costs of maintaining assets estates, technical infrastructure etc. are materially different from the budget	Ensure all maintenance costs are built on sound data and analysis, using known costs and existing benchmarks wherever possible, engage the market early where necessary. Any cost estimates should be transparent and produced by or with reference to suitably qualified and experienced individuals

Risk Area	Risk description	Mitigation
Operational cost risk	Operating costs vary from budget which would impact on service viability and future charging model	Ensure all operating costs are built on sound data and analysis, using known costs and existing benchmarks wherever possible, engage the market early where necessary. Any cost estimates should be transparent and produced by or with reference to suitably qualified and experienced individuals
Operational performance risk	Performance standards slip below that of the SLA, which would damage the service's reputation and impact on investigations	Ensure operations are established with the necessary resources to achieve SLAs, with reference to current resource and performance levels Ensure management / governance structures are in place to monitor performance against SLAs and identify remedial action where necessary Ensure MI / BI systems are established to provide insight and early warning as to SLA conformance failures
Supplier risk	Suppliers are unable to deliver outputs as contracted which would impact on service availability.	Conduct thorough due diligence on suppliers, establish contractual clauses, payment milestones, performance frameworks and so on Maintain open and regular dialogue with suppliers to encourage early warning of issues and work with suppliers to overcome them
Reputational Risk	There will be an undermining of customer/ media perception of the service's ability to fulfil its requirements e.g. adverse publicity concerning an operational problem which will impact credibility with Forces and the wider CJS	Ensure a suitable communication and stakeholder management plan is in place to manage the external perception of the change Prepare content / responses to likely negative scenarios
Technology risk	Changes in technology result in services being provided using sub-optimal technology which increases operational cost above that necessary or reduces the effectiveness of the service in supporting the CJS	Engage the market to understand the latest technology offerings, work with the ICT departments within Forces to understand existing technology landscape and roadmaps for future development Develop a commercial strategy that enables a flexible, rapid response to changes in technology such that refresh plans can be adapted to swap in new higher quality or more cost effective technical solutions

Risk Area	Risk description	Mitigation
Staffing risk	Too many skilled staff leave rather than move to the new hub locations which would impact on the ability of the service to meet volume and quality SLAs	As part of implementation planning ensure robust workforce planning and management analysis is undertaken to understand the existing workforce by skill mix, proclivity to commute, re-skill etc. Ensure skills availability matches expected demand, and establish mechanisms to manage some level of demand above plan through e.g. overtime, maintaining a back-up capability etc.

2.10 Constraints

Constraints are the internal parameters that have been established at the outset of the project. These have been identified as follows.

Table 4 Constraints

Title	Description	Impact
Force participation	The TF programme, and therefore the Fingerprint Capability project, is not a mandatory requirement for forces, therefore participation is through an opt in approach	The project will work with Forces to enable them to participate at a time and manner that meets their needs wherever it is possible to do so with negatively impacting the programme. If a large number of forces do not opt in the costs and benefits of the programme will change
Regulatory framework	Continuation of current Fingerprint accreditation framework and FSR timeline (deadline 01/10/18)	The current timeline and accreditation requirements run ahead of TF to some extent, thereby limiting the opportunity for TF to deliver further benefits in this area
In-flight local change activity	Current or ongoing forensic local change programmes are in progress with their own activities, authorities and dynamic	Existing programmes of change could detract from the cohort Forces interest in participating in TF or require that the Fingerprint Capability project plans are altered to fit with local requirements

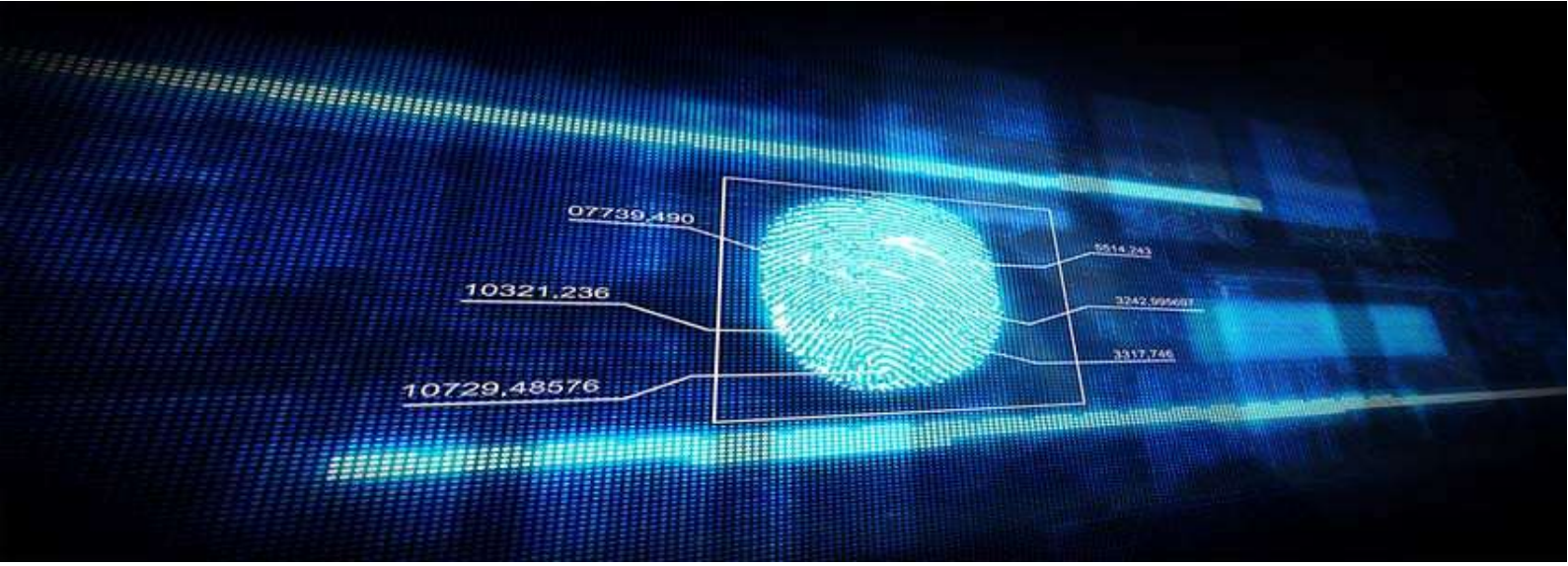
2.11 Dependencies

The main dependencies, defined as being factors outside the direct control of the programme team, which will be carefully monitored and managed throughout the lifespan of the project, are as follows:

- Agreement of the associated designs and project plans / timescales with the HOB Programme
- Ability to procure the necessary technology components, licences and design / implementation resources within the timeframes available
- Agreement of cohort Forces to continued participation in the Programme
- Identification and agreement of a suitable composition of bureaux to participate in the implementation waves
- Accreditation / Forensic Regulator impacts on CJS for non-accredited bureaux
- Existing accreditation work within Forces

- Agreement on ways of working and interaction with the Forensic Information Databases Services (FINDS)
- The project plans / timescales of the Emergency Services Mobile Communications Programme (ESMCP)
- Ability to use / work with Police ICT Company – IT procurement/infrastructure
- Ability and willingness of the College of Policing to deliver Fingerprint Training Licensing Model

TF is working very closely with other national programmes such as HOB, ESMCP, NABIS and Digital Policing. Part of the required inter-programme governance is provided by the Executive Review Board. In addition, however, there are links to other Boards and groups e.g. the Police Technology Council and Joint Technology Working Group to ensure alignment with other technical / ICT-related developments.



3. The Economic Case

3.1 Introduction

In accordance with the Home Office best practice and requirements of HM Treasury's Green Book (A Guide to Investment Appraisal in the Public Sector), this section of the BC documents the investment appraisal process and provides evidence to show that the most economically advantageous option, which best meets service needs and optimises value for money has been selected.

3.2 Critical Success Factors

The Critical Success Factors (CSFs) are the criteria against which the project will judge its success and which have been used alongside other factors when assessing long and short-listed options.
The project CSFs are:

Critical success factor	How to evaluate / description / definition
CSF1. Strategic fit	How well the option fits with other key elements of national, regional and local strategies; in the context of this project such strategies include: Policing Vision 2025, Home Office Forensic Science Strategy, Forensic Science Regulator's Code of Practice
CSF2. Operational Efficiency	How well the option satisfies the existing and future needs of the organisation to operate efficiently, delivering value for money for customers
CSF3. Operational Effectiveness	How well the option satisfies the existing and future needs of the organisation to operate effectively and meet customer requirements round quality, timeliness, availability
CSF4. Resilience	How well does the option enable the organisation to manage and balance demand, especially around surge resulting from major events, and provide out of hours service when needed for major crimes
CSF5. Availability of current, skilled specialist techniques	How well does the option help England and Wales Policing to retain access to specialist forensic techniques which are seldom used, but vitally important when they are used

Critical success factor	How to evaluate / description / definition
CSF6. Achievability	TF's ability to innovate, adapt, introduce, support and manage the required level of change, including the capacity and capability of skills to implement the change and manage associated risks. Extent to which the service users can assimilate, adapt and respond to the change brought on by the option within the allotted timescales
CSF7. Acceptability to PCCs and CCs	Appropriateness - is the option a proper and ethical thing for Policing to do? Equalities - would the option provide equal opportunity for all stakeholders to access the service? Community impact – how would the option impact on individual communities or future opportunities for communities in terms of jobs, services and so on Force Policing impact – does the option negatively impact local Policing capabilities
CSF8. HOB Readiness	To what extent does the option facilitate HOB readiness, enabling Forces not only to use the new HOB Matcher, new HOB workflow and new HOB tools, but to make the most of the opportunities they afford Forensics
CSF9. R&D and innovation	How well does the option facilitate an increase in Forensic R&D and innovation, including identifying opportunities and facilitating proofs of concept and providing a market at scale to receive new techniques; also to what extent does the option reduce duplication of development effort and shape the innovation in areas most needed
CSF10. Affordability to Forces	Is the option affordable for Forces given anticipated financial resources
CSF11. Fit for Purpose, Skilled, Professional and Accredited Workforce	How well does the option support Forensics in the UK in growing new talent, maintaining skills and currency of existing talent and ensuring that talent can be accessed when needed, where needed by users of forensics.

3.3 The long-listed options

The long list of options was generated through a systematic examination of the choices the project had. An Options meeting was held, attended by Programme resource including seconded Policing resource to discuss the options under each choice and identify pros and cons of each. The choices were identified based on:

- Scoping options – choices in terms of coverage (the what)
- Service solution options – choices in terms of solution (the how)
- Implementation options – choices in terms of the delivery timescale (the when) or resources (the who)
- Funding options – choices in terms of commercials, implementation and operation funding (the money)

The detailed output from the longlisting meeting can be found at **Error! Reference source not found.**

3.4 Short-listed options

Based on a review of the longlist options, their pro's and cons' and fit with the CSFs it was agreed that the main choices for the project are the number of hubs to recommend and the degree to which services are brought together i.e. aggregation or integration and regional or national governance structures. This decision was taken in the context of feedback on the OBC which implied all participating forces accepted the need for some aggregation but were reluctant to commit to full integration with a unified, national governance structure.

The shortlist of options which have been taken forward for examination in the economic case of this business case are:

- Option 1 – Baseline including HOB readiness and Accreditation
- Option 2a – "9+1 MPS" aggregated Hub configuration without integration retaining independent regional governance
- Option 2b – "9+1 MPS" aggregated Hub configuration with integration, retaining independent regional governance
- Option 2c – "9+1 MPS" aggregated Hub configuration with integration and single-body governance
- Option 3a – "7+1 MPS" aggregated Hub configuration without integration
- Option 3b – "7+1 MPS" aggregated Hub configuration with integration, retaining independent regional governance
- Option 3c – "7+1 MPS" aggregated Hub configuration with integration and single-body governance
- Option 4 – This is the equivalent of the OBC's option 5 and consists of 3 'super-regional' hubs with a unified, fully integrated end-to-end forensic service under single management.

Notes:

A genuine do nothing option is not a viable baseline against which to assess the Programme's change options, since HOB readiness changes in working practices to maximise the benefits of HOB and accreditation activity will be required in any event.

The option 2 variants are described as 9+1 MPS, this is to represent the option of having a higher number of hubs and to ensure the cost and benefit implications of having more hubs are considered. For the avoidance of doubt 9+1 is indicative and not a firm conclusion.

The option 3 variants are described as 7+1 MPS, this is to represent the option of having a lower number of hubs and to ensure the cost and benefit implications of having fewer hubs are considered. For the avoidance of doubt 7+1 is indicative and not a firm conclusion.

Option 4 is included to ensure consideration is given to the full range of possibilities previously set out in the OBC. It is possible to take the aggregation and governance further: even fewer hubs, and a separate forensic service. Given feedback on the OBC, this is probably an unacceptable option but it does require analysis to provide decision-makers with a clear understanding of all the choices before them.

More detail is provided on the shortlisted options in Figure 6 Shortlist options further detail.

Figure 6 Shortlist options further detail

	Option 1	Option 2a (9+1) and Option 3a (7+1)	Option 2b (9+1) and Option 3b (7+1)	Option 2c (9+1) and Option 3c (7+1)	Option 4
Processes	• FP Bureaux continue working with existing processes subject to: • Accreditation requirements for change; • Process changes required to fit with new HOB Matcher, workflow and tools	• Aggregated Bureaux use a single set of regionally agreed processes (to facilitate accreditation and efficiency), these will be based around the HOB Matcher, workflow process and tools • Work will be done within the region, not automatically shared	• Aggregated Bureaux use a single set of regionally agreed processes (to facilitate accreditation and efficiency), these will be based around the HOB Matcher, workflow process and tools • Work can be shared with other Hubs	• Aggregated Bureaux use a nationally agreed single set of processes (to facilitate accreditation and efficiency), these will be based around the HOB Matcher, workflow process and tools • Work is automatically balanced and shared across Hubs	• Aggregated Bureaux use a centrally agreed single set of processes (to facilitate accreditation and efficiency), these will be based around the HOB Matcher, workflow process and tools • Work is automatically balanced and shared across Hubs
Capabilities	• Existing capture and transmission capabilities • Able to integrate with: ○ HOB Matcher, ○ Workflow ○ Tools • Each Bureaux achieves and maintains its own accreditation capability	• Digital capture and transmission • Able to integrate with: ○ HOB Matcher, ○ Workflow ○ Tools • Accreditation is achieved and maintained at the aggregated hub level	• Digital capture and transmission • Able to integrate with: ○ HOB Matcher, ○ Workflow ○ Tools • Accreditation is achieved and maintained at the aggregated hub level	• Digital capture and transmission • Able to integrate with: ○ HOB Matcher, ○ Workflow ○ Tools • Accreditation is achieved and maintained at a national level with verification at regional Hubs and other locations	• Digital capture and transmission • Able to integrate with: ○ HOB Matcher, ○ Workflow ○ Tools • Accreditation is achieved and maintained at a national level with verification at regional Hubs
Governance / Management	• Bureaux maintain existing management	• Regional governance, structure to be defined, Hub	• Regional governance, structure to be defined, Hub	• Single national governance body, the Forensic Capability	• A new, single, unified organisation, under single management

	Option 2a (9+1) and Option 3a (7+1)	Option 2b (9+1) and Option 3b (7+1)	Option 2c (9+1) and Option 3c (7+1)	Option 4
	management structure	management structure	Network (FCN), structure to be defined, Regional Hub Management Teams reporting to the FCN	
tions	• Single new organisation at the regional Hub delivering FP services for the region; one FP team delivering a standardised service across the region	• Single new organisation at the regional Hub delivering FP services for the region in which it is based and other regions; one FP team delivering a standardised service across the region and for other regions subject to governance agreement	• The FCN operating at the national level, supported by local management at the regional Hub delivering FP services to meet national demand; one FP team delivering a standardised service across the all regions	• A unified, fully integrated end-to-end forensic service under single management that would deliver to local, regional and national (and international) requirements; one FP team delivering a standardised service across the all regions
	• The regional FP team is located in a single physical location within the geographic region it serves	• The regional FP team is located in a single physical location within the geographic region it predominantly serves	• The national FP team is located in a multiple physical hub locations within geographic regions	• The national FP team is located in 3 super-regional hubs
th	• Hubs are served by a new technical architecture, FP	• Hubs are served by a new technical architecture, FP	• Hubs are served by a new technical architecture, FP	• Hubs are served by a new technical architecture, FP

	Option 1	Option 2a (9+1) and Option 3a (7+1)	Option 2b (9+1) and Option 3b (7+1)	Option 2c (9+1) and Option 3c (7+1)	Option 4
		regional Uniqueue[2] using HOB ready equipment • No integration with other Hubs	regional Uniqueue[2] using HOB ready equipment • There is networked integration with other Hubs allowing Hub staff to pick from other regional Uniqueues when governance / management requires e.g. to support surge	regional Uniqueue[2] using HOB ready equipment • There is networked integration with other Hubs and a national Uniqueue	regional Uniqueue[2] using HOB ready equipment • There is networked integration with other Hubs and a national Uniqueue
Suppliers / Partners	• Continue to use existing arrangements with other forces for specialist services, managing demand etc.	• New arrangements needed between regional governance bodies for the management of demand / surge and the pricing of services, and for the access of out of hours services, specialist services and so on	• New arrangements needed between regional governance bodies for the management of demand / surge and the pricing of services, and for the access of out of hours services, specialist services and so on	• New arrangements established by the National governance body to manage pricing, SLAs and performance of a national service	• The new, single-management organisation establishes new arrangements around pricing and performance of a unified service
Customers	• Bureaux continue to serve their Force or Forces (if already	• Regional aggregated Hubs serve the Forces within their	• Regional aggregated Hubs serve the Forces within their	• Regional Hubs serve all customers of the national service	• Regional Hubs serve all customers of the unified service

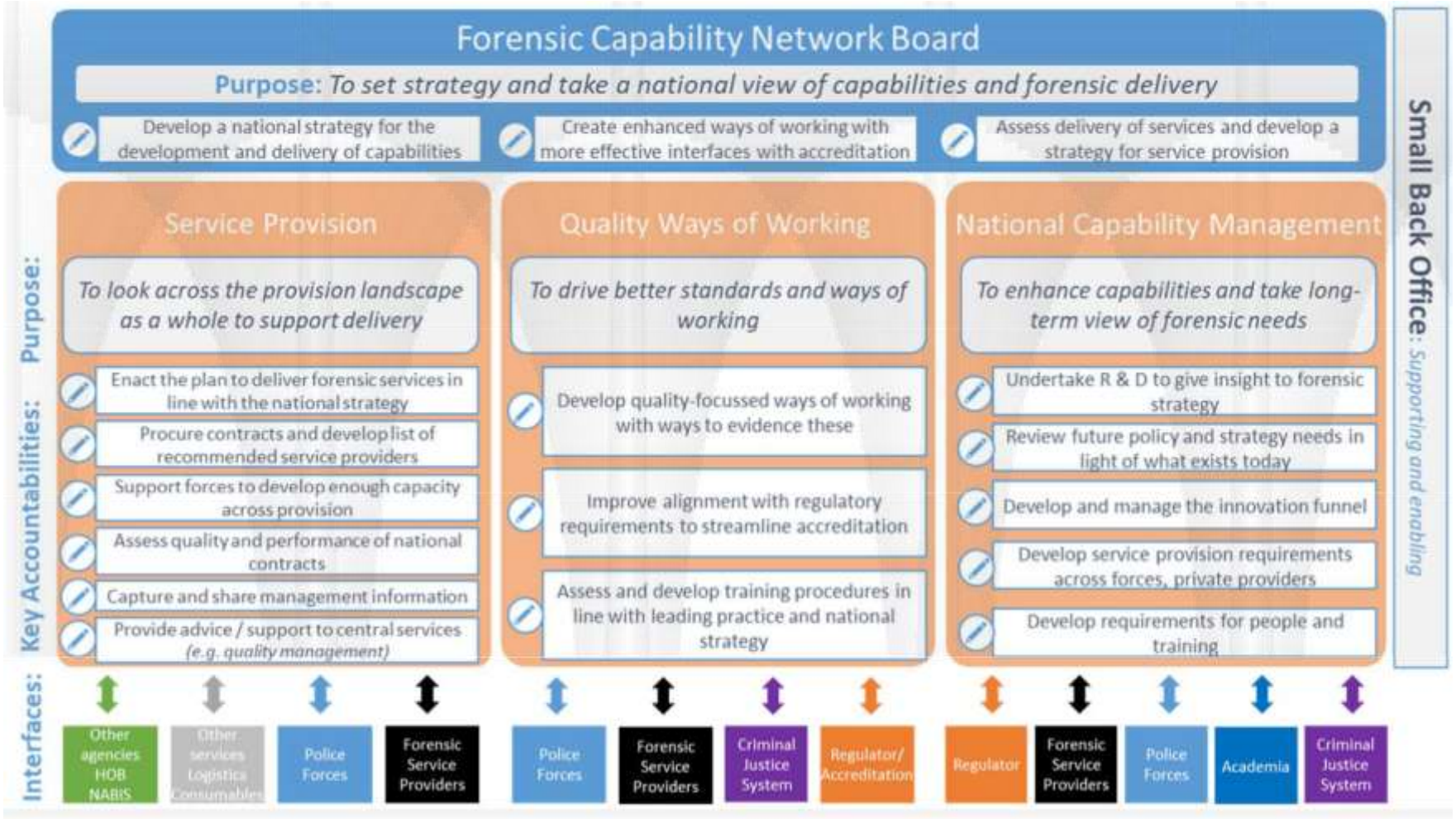
[2] Uniqueue refers to a single queueing system whereby, in this context, FP experts will take or be given the next available fingerprint requiring examination regardless of origin (subject to the regional / national difference by option; there can be rules prioritising fingerprints by urgency or by the level of experience required of the expert and so on.

	Option 1	Option 2a (9+1) and Option 3a (7+1)	Option 2b (9+1) and Option 3b (7+1)	Option 2c (9+1) and Option 3c (7+1)	Option 4
	aggregated in some way) other Forces or commercial organisations and public bodies served will continue under current arrangements	geographic region and other Forces or commercial organisations and public bodies already served by member Forces continue under current arrangements. Support to Forces outside the geographic region will continue to be served under arrangements to be agreed between the regional governing bodies e.g. mutual aid.	geographic region and other Forces or commercial organisations and public bodies already served by member Forces continue under current arrangements.		

3.4.1 The Forensic Capability Network

Under option 2c and 3c the intention would be to establish a small, sustainable unit that will oversee and manage a networked series of forensic science capabilities – the Forensic Capability Network (FCN). This will then be able to support the transformation of other forensic services, including those on the frontline. Figure 7 Overview of the Forensic Capability Network, below describes how this is envisaged to be structured, its purpose and key accountabilities.

Figure 7 Overview of the Forensic Capability Network



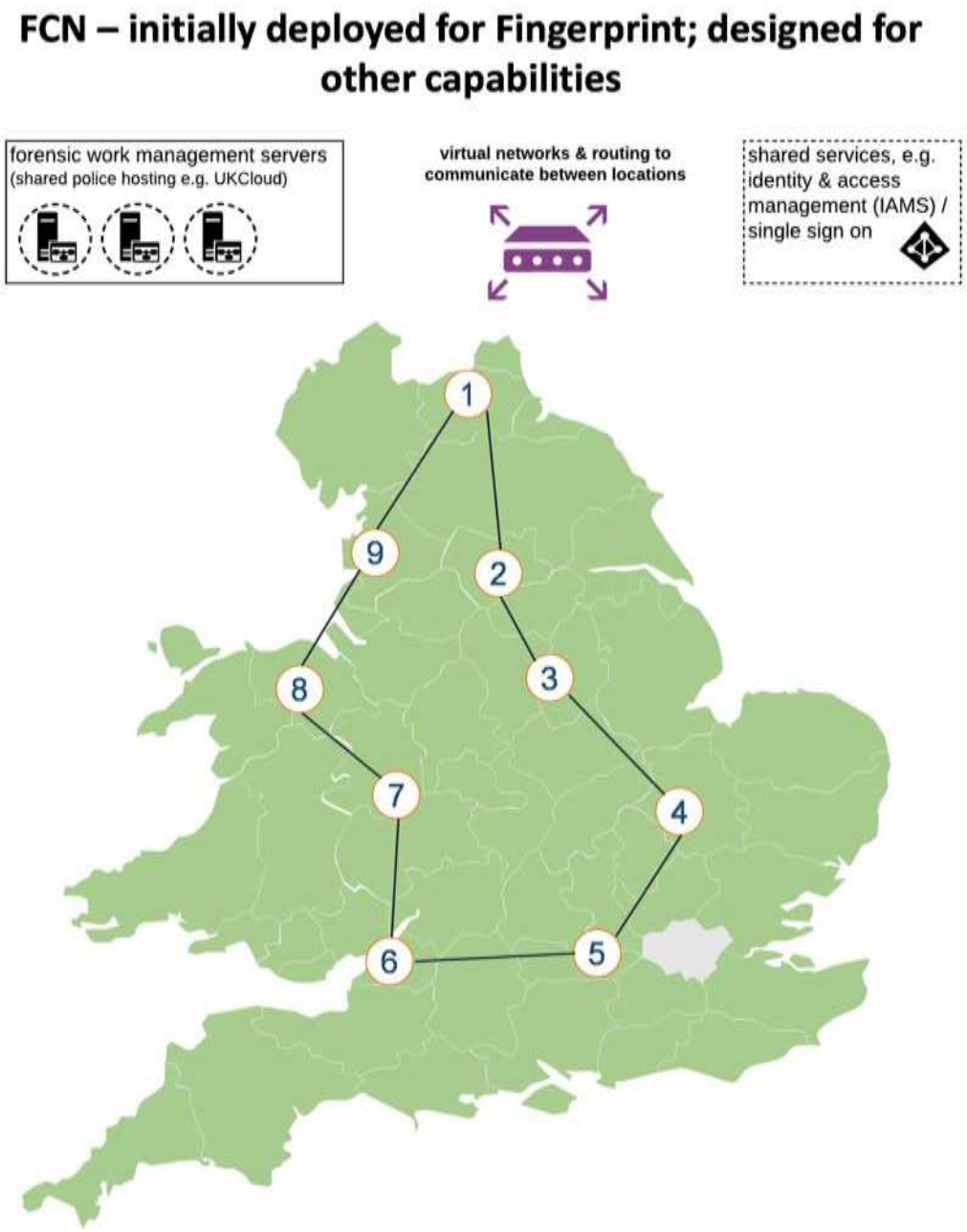
The purpose of this FCN body is to create a structure that has the mandate and flexibility to underpin and guide the **future sustainability, evolution and success** of the forensic landscape. The body will need to evolve over time to meet future demands and capabilities, with key benefits of this model including:

- Simplifies **stakeholder relationships** with a **coherent view** across the landscape
- Supports a **UK-wide view of forensic science**, anticipating future needs, developing solutions and models to address them and, where appropriate delivering critical national capabilities
- Reduces cost of **procurement and delivery**
- Increases **quality of operating procedures** and **improved outcomes**
- Facilitates sharing of **best practice and collaboration** across forces
- Allows forces to **access volume and specialist services** as required
- Develops **resilience and surge capacity** across the network.

3.4.2 The technical solution

The Fingerprint Capability project will see the development of a networked solution to connect all bureaux and facilitate the "National Grid" concept.

Figure 8 High level solution architecture



3.5 Options' advantages and disadvantages

3.5.1 Option 1 – Baseline including HOB readiness and Accreditation

A genuine do nothing option is not a viable baseline against which to assess TF's change options, since HOB readiness, with new ways of working adopted and accreditation activity will be required in any event, these are real activities and real costs which Forces will need to undertake. The economic cases for the proposed change options will be compared against the baseline for current activity, plus an assumption of the cost and benefit of them becoming HOB ready and becoming and maintaining accreditation on their own.

Advantages	Disadvantages
No programme costs incurred	Poor strategic fit given the Policing 2025 and Forensic Regulator's requirements and the Home Office Forensic Strategy

Advantages	Disadvantages
Forces take responsibility for their own HOB Readiness and Accreditation, those that can go faster are free to do so, they are not constrained by Forces that have made less progress to date	Reinforces a cost structure which is recognised as unsustainable within current and future financial envelopes
Focuses effort on the "must haves" of HOB Readiness and Accreditation without distraction from other programme activity or competing priorities	Fails to optimise the benefits from HOB readiness
Delivering HOB readiness will facilitate benefits of the: • HOB matcher in terms of improved service and improved efficiency, • HOB workflow in terms of improved service and improved efficiency • HOB tool in terms of improved service and improved efficiency	Incurs avoidable cost of achieving accreditation individually and builds in costs of maintaining accreditation in future years
Delivering accreditation will: • Ensure Policing Forensics retains the trust, confidence and credibility of the wider CJS and the public at large • Avoid the need for disclaimers or other caveats being applied to forensic evidence in court cases which could reduce its impact and value	Cannot be paid for using PRTB funding and therefore all costs will fall to the Forces

3.5.2 Advantages and disadvantages of more hubs e.g. 9+1

Figure 9 "9+1" Hub Configuration illustrates how a 9+1 hub configuration might work in practical terms, the principles underlying this configuration are:

- Use current NPCC standard regions as the starting point
- Minimum size at least equal to EMSOU
- Keep the existing FP collaborations
- Wales as a single hub

Figure 9 "9+1" Hub Configuration

Advantages	Disadvantages
The geographical scale of the regions is smaller for a number of hubs which could ensure Forces, PCCs and CCs feel they still have some proximity and by extension influence and control over the entity	More hubs mean potentially fewer economies of scale, for example there will be 9 or more management structures
It should be easier from a governance perspective, simply in terms of being able to find a suitable meeting point within a reasonable distance of each participating Force	Some smaller regional hubs might be sub-scale from the start in terms of the critical mass of staff required to deliver the service compared with the volume of work available (subject to integration and governance arrangements), and could be less efficient than necessary.
Smaller regions should reduce unwanted attrition of skilled staff as it is likely more staff will remain within commuting distance of the new hub location	Potentially more regions to work with in developing standards, policies and procedures or agreeing a single national approach
Able to shape natural groupings and achieve balanced hubs in terms of "local" demand	

Advantages	Disadvantages
More hubs should reduce implementation complexity and cost	
Regions may be seen to remain more “local” and therefore gain increased cohort buy-in	

3.5.3 Advantages and disadvantages of fewer hubs (e.g. 7+1)

Figure 10 "7+1" Hub Configuration. Figure 10 "7+1" Hub Configuration illustrates how a 7+1 hub configuration might work in practical terms, principles underlying this configuration are:

- Use current NPCC standard regions as the starting point
- Keep the existing FP collaborations
- Wales as a unit
- Large as possible without major investment or disruption

Figure 10 "7+1" Hub Configuration

Advantages	Disadvantages
Fewer hubs mean potentially greater economies of scale, for example there will be only approximately seven management structures	The geographical scale of the regions is large which could risk increasing the sense of “removal” from local policing

Advantages	Disadvantages
Fewer hubs should all have the scale necessary to justify the critical mass of staff required to deliver the service (subject to integration and governance arrangements), and should be as efficient as possible.	It could be more difficult from a governance perspective, at a practical level this could be the difficulty in finding a suitable meeting point within a reasonable distance of each participating Force, from the service perspective the large regions could consist of Forces with very different characteristics, and demands of Forensics
Fewer regions to work with in developing standards, policies and procedures or agreeing a single national approach, decision making should be more streamlined.	With large regions it may be impractical for existing staff to commute and many may be reluctant to relocate, this could result in unwanted attrition of skilled staff, a problem which may be difficult to resolve in the short term if demand for skilled staff outstrips supply within the commuting catchment area of the new hub
	Existing forensic estate could be left underutilised and without an alternative use, and there may be a lack of suitably sized and equipped facilities in some of the regions given the potential size of the workforce required
	Fewer Hubs will increase the level of change resulting in a more complex and costly implementation

Summary of the number of hubs

Other configurations or variants around both of the above options for the number of hubs are possible, and it is not practical to analyse them all in depth. The intention is that with these two options plus the "Do Nothing" option and the most ambitious option, Option 4 (The OBC's option 5) this business case will provide the necessary information to decide upon the best configuration scale in principle, i.e. a smaller or larger number of Hubs.

3.5.4 Advantages and disadvantages of aggregation

Definition

Aggregation is defined for the purposes of this business case as the physical co-location of Fingerprint services provision within a region, e.g. where the staff and equipment from a small number of existing Fingerprint Bureaux are moved to a single location (which may or may not be one of the initial locations).

Advantages	Disadvantages
Enables quicker and cheaper accreditation through fewer sites, with local standards, policies, procedures and suitably qualified and experienced personnel requirements	Lack of integration with other regions prevents development of resilience at the national level
Enables lower cost maintenance of the accreditation in future years through hub management of adherence to standards,	Regional governance prevents full realisation of national decision-making

Advantages	Disadvantages
policies, procedures and suitably qualified and experienced personnel requirements	
Delivers efficiencies through economies of scale and streamlined management structure	
Shares best practice within regions to improve quality and reduce costs	
Builds resilience within the region, e.g. through scale to manage surges in demand within the region	
Improves customer service with potential for better provision of out of hours services when required	
A single governance structure within a region should speed up decision making and increase responsiveness of the service to changes in demand, customer requirements etc., it may also facilitate increased and more efficient R&D within the region	

3.5.5 Advantages and disadvantages of integration

Definition

Integration is defined for the purposes of this business case as the electronic networking of multiple Fingerprint Bureaux, enabling seamless transfer of bureaux workload across that network.

Advantages	Disadvantages
Builds resilience nationally, e.g. through the capability to manage surges in demand nationally (if necessary policies and agreements are in place)	Increased cost of implementation and on-going operating costs
Improves customer service with potential for better provision of out of hours services when required, possibly from another region (if necessary policies and agreements are in place)	Perceived loss of control with at the Force or region level, depending on the governance arrangements, policies and agreements in place for work balancing and information sharing
Facilitates and encourages fully standardised processes across all fingerprint hubs	
Enhances continuity in the instance of, for example, technical failure at a single location, work could easily be distributed across the network	
Regional structures retain control	

3.5.6 Advantages and disadvantages of regional governance

Definition

Regional governance in the context of this business case, is defined as an autonomous governing body, representing the interests of a region (an aggregated number of Fingerprint Bureaux), not answerable to a national governing body with specific responsibility for Forensic or in particular Fingerprint services. A regional governing body would still form part of the normal governance hierarchy within Policing.

The regional governing body would set policies and procedures within the region, and would be responsible for establishing agreements with other regional governing bodies to cover, for example, standardisation of processes, workload balancing and data sharing (if any were sought).

The precise form such a regional governing body might take is not yet defined and will be developed over the coming months.

Advantages	Disadvantages
A single governance structure within a region should speed up decision making and increase responsiveness of the service to changes in demand, customer requirements etc., it may also facilitate increased and more efficient R&D within the region	Fails to realise the benefits of full national governance facilitating a whole system approach which would offer the most efficient and effective service delivering a better customer service
Retaining governance at the regional level may be more appealing to PCCs and CCs keen to retain control over their service, and therefore increase the likelihood of Forces participating in TF	With multiple governance bodies there will be no single voice of Fingerprints in discussions or negotiations with the Forensics Regulator, Accreditation Provider (UKAS), FSPs, equipment and equipment / software providers and so on
Regional bodies may be able to sustain a deep knowledge of the operational factors in the region and lead to better management decisions	Multiple regional governance bodies may be more expensive to operate than a single national governance body

3.5.7 Advantages and disadvantages of national governance through the FCN

Definition

In the context of this business case, national governance implies a single national body, representing the interests of Fingerprint Bureaux nationally. The national governing body would set policies and procedures across all cohort Fingerprint Bureaux, and would be responsible for establishing agreements at a national level to cover, for example, standardisation of processes, accreditation, workload balancing and data sharing.

The precise form such a national governing body might take is not yet defined and will be developed over the coming months. A national governance structure does not exclude the possibility of regional governance as part of the structure, however it would be answerable to the national body.

Advantages	Disadvantages
A single, national governance structure will speed up decision making and increase responsiveness of the service to changes in demand, customer requirements at the national level, and is also more likely to	Governance at the national level may be less appealing to PCCs and CCs keen to retain control over their service, and therefore increase the likelihood of Forces discontinuing their participation in TF

Advantages	Disadvantages
facilitate increased and more efficient R&D and innovation nationally	
Enable the realisation of the greatest efficiencies and the most effective and customer responsive service for customers	A national body may become remote and disconnected from the regional realities of the operational factors in the regions and lead to slower and or poorer management decisions
A single national governance body may be cheaper than multiple regional governance bodies	
The national body can act as a single voice for Fingerprints when managing relationships or representing the science with the Forensics Regulator, FSPs, equipment and machinery providers and so on	

3.5.8 Option 4 – a 3 super-hub, unified service under single management

This option is based on the main tenets of the OBC's option 5: "a unified, fully integrated end-to-end forensic service under single management that would deliver to local, regional and national (and international) requirements. It would design, direct and deliver forensic services built around local forces' needs, from the scene of crime to the transfer of forensic evidence into the criminal justice system, while seeking process economies that would offer best value for money." This option assumes 3 super-regional hubs delivering the service nationally.

Advantages	Disadvantages
Having as few as three hubs offers even greater scope for economies of scale, process efficiencies and standardisation across the service	By reducing the network to just 3 hubs this option could in fact reduce resilience and increase risk, if one of the hubs were to become inoperative for whatever reason, there would only be two hubs to pick up the additional workload, this could be an unmanageable increase in the short term. Too much capacity may have been taken out of the system
Lower cost of accreditation with fewer locations for validation or verification	It is unlikely that three hubs could be found within the current estate to house the service adequately, if new estate had to be found or built to accommodate a super-regional hub it would extend timelines of transition, increase costs and cause greater disruption to services
Reduced levels of infrastructure between hubs to deliver integration	Feedback on the OBC indicates this option would not be acceptable to decision-makers, and is, therefore, also unachievable within programme timelines.
Better use of physical assets including IT equipment	

The advantages and disadvantages described above are not exhaustive, further analysis can be found in Appendix 2 Options pros and cons workshop outputs.

3.6 Economic appraisal

3.6.1 Introduction

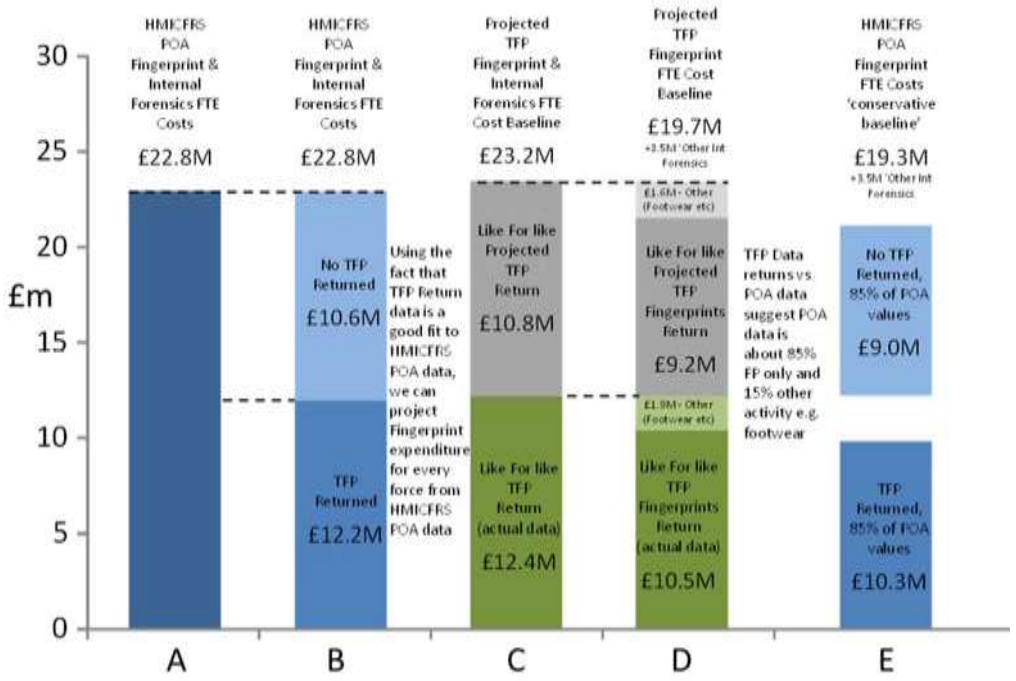
This section provides a detailed overview of the main costs and benefits associated with each of the selected options. Importantly, it indicates how they were identified and the main sources and assumptions.

3.6.2 Calculating the baseline for fingerprints.

Two sources were used in the assessment: the data published by HMICFRS – the Police Objective Analysis prepared by CIPFA; and the data specifically collected by the TF Transition Team. The data collected from forces was compared with the HMICFRS data and a strong correlation between the two was evident, this gave confidence that the HMIC data could be adjusted and used as a consistent reference point for all forces.

The baseline for the estimates can be explained by the following chart, Figure 11 below.

Figure 11: Baselining FP Bureaux Costs



In Figure 11, column A represents the 2016/17 costs of 'Fingerprints and Internal Forensics' FTEs as collected by HMICFRS in the Police Objective Analysis, a cohort total of £22.8m. The forces for which comparable data were available represented £12.2m of the cohort total, see column B. These forces showed equivalent expenditure of £12.4m in the returns collected by the programme, see column C. This may be timing differences or differences in definition. If the cohort forces for which there was no return are scaled up in the same ratio, their value would be £10.8m, see column C. The returns showed that about 15% of the total of 'Fingerprints and Internal Forensics' was on other services, such as footwear, see column D. Making the same adjustment for the forces for which there were returns and for those where there were not, then the baseline cost of FTEs in fingerprint bureaux is about £19.3m a year and there are about £3.5m of other internal forensics costs.

3.6.3 Estimating benefits

Economies of scale through aggregation

Evidence for economies of scale from creating regional collaborations has come from three main sources:

- Evaluation of collaborations undertaken by HMICFRS[3]
- the direct experience of the three existing regional collaborations (East Midlands Special Operations Unit[4], Yorkshire and the Humber[5], and South West Forensics)
- an analysis of unit costs of fingerprints.

HMIC's report "Increasing efficiency in the Police Service: the role of collaboration", provides a range if examples of collaboration, some between forces, some with other parts of the public sector and some with the private sector. The scale of the opportunity depended on how far forces had addressed efficiency issues as well as the type of service. There are examples of collaboration in specialist functions as well as back-office functions.

The three collaborations provide direct evidence of what has actually been achieved in forensic services and the practical steps that were taken. There are also lessons learnt from the implementation that can be applied elsewhere.

The analysis unit costs help to establish that the current collaborations were not peculiar to the circumstances in those regions and that there are similar gains to be made elsewhere. This complements the broader studies by HMICFRS.

Ideally the unit costs would be calculated from a range of operational data e.g. proportion of crime scenes from which prints are collected; number of prints collected per CSI day; proportion of prints collected that are useable; proportion of matches from useable prints submitted to IDENT1; submissions per fingerprint expert etc. The parallel Transforming Forensics project has struggled to find good operational data, and this repeats the findings of the National Audit Office report in 2014[6]. This found:

The data available publicly on forensics spending is limited. The information that is available is incomplete, inconsistent and/ or difficult to access. The Committee's report on Forensic Science published in July 2013[7] identified issues with the consistency and detail on forensics expenditure contained in police force accounts. We found that police force accounts contain a figure for overall investigative support, but did not give detail on internal and external forensic services expenditure. Separately, only one national level dataset collected by CIPFA covered police forces' internal and external forensics expenditure. This provides high-level visibility on aggregate expenditure, but no detailed data on prices and costs. Furthermore, while CIPFA

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[3] HMIC, Increasing efficiency in the Police Service: the role of collaboration, 2012

[4] See also Cm9217, Forensic Science Strategy which contains this case study: "East Midlands collaboration Five police forces in the East Midlands region; Derbyshire, Leicestershire, Lincolnshire, Northamptonshire and Nottinghamshire, have shared policing expertise and resources, including forensic science, to improve their effectiveness and increase the capability to detect and prevent serious crime. The collaboration programme seeks to combine innovative yet practical approaches to policing to make the region a safer place to live, work and visit.

Collaboration on forensic science sits within the East Midlands Special Operations Unit (EMSOU), and is formalised by a document legally-binding on each of the police forces. EMSOU is not separate from the five forces, it is an amalgamation of the key resources that can be deployed as and when there is an investigative need. Through this approach, the East Midlands region has reduced forensic science costs by 44%; from £24 million in 2010 to just over £13 million in 2015."

[5]

[6] NAO, Briefing for the House of Commons Science and Technology Committee, The Home Office's oversight of forensic services, December 2014

[7] Forensic Science, House of Commons Science and Technology Committee, Second Report of Session 2012-13, HC 610, July 2013

issues guidelines on how police forces categorise their forensic expenditure these can be interpreted differently at the local level, making it challenging to do cross-police force comparisons.

In the absence of a consistent up-to-date and useable set of data, the fingerprint FTE cost per recorded crime has been used. This has the disadvantage of including policy differences (e.g. the scope of crimes to which CSIs are sent) as well as efficiency differences (e.g. cases per fingerprint expert) and economy (e.g. pay per fingerprint expert). The advantage is that it is a complete data set that is consistent within the HMICFRS published data. It also removes the variation in costs that arises from the wide differences in crimes per 1,000 population that are inherent in the HMICFRS VFM tables.

The unit costs have been calculated to test whether there are material differences between the collaborations and larger forces on the one hand and smaller forces on the other. The analysis demonstrates that the aggregated forces are at the lower cost end of the range and the small individual forces are at the higher end of the range. When taken together with the experience of the aggregated forces this suggests:

- there are economies of scale from aggregation
- these have been demonstrated under the current technology and arrangements (e.g. current IDENT1)
- the scale of the opportunity for improvement is substantial.

The financial model has been used to calculate the impact of the forces moving to the average of the aggregated unit costs. This is a saving of about £5m a year from £19m a year baseline. This is less than the savings achieved by some of the existing collaborations, but there is some evidence that costs have been reduced in some of the forces already. As an overall indicator of the scale of what can be achieved from aggregation, this is currently the most reliable figure available to the programme.

FP aggregation calculation

- Assume savings achieved by EMSOU, YatH and SW are open to non-aggregated and semi-aggregated forces.
- Assume EMSOU is smallest size desirable (i.e. bigger could be more efficient than EMSOU)
- Adopt NPCC regions where possible
- Keep current aggregations so keep Kent with Essex in East
- Excludes non-cashable performance improvements included in CSIs and FP bureaux

Integration - managing the capability as a network

The Forensic Capability Network – a body that will manage the infrastructure and facilitate common processes and standardised procedures across the cohort. This will enable several efficiencies, such as:

- Optimising work flow
- Balancing peaks and troughs of work across forces and regions
- Provide a single legal entity for accreditation services
- Reducing the costs of extended hours of service

FP integration calculation

- Assume connections are in place at force and hub levels
- Assume E&W network coordinating body is set up (e.g. the FCN)
- Assume full cross force working is managed
- Assume non-cashable performance improvements included in CSIs and FP bureaux

The impacts on bureaux are being assessed and will depend not only on the HOB processes and the infrastructure, but also the cohort and the ways of working adopted by the FCN. At this stage, the benefit is estimated to be a further 5% improvement to bureaux processes, which would be worth £0.7m a year on the aggregated and connected bureaux.

CSI efficiency calculation

- Assume connections are in place at force and hub levels, and an E&W network coordinating body is set up (e.g. the FCN), which facilitates full cross force working in the processing of fingerprints
- CSIs will be working in a more standardised way (though still locally accountable) and following good/best practice
- Work can be balanced between forces, thereby reducing backlogs, overtime etc.
- Assume that cross-force working, FCN, HOB optimised processes, ISO17020 etc. result in improvements of 10% half of which is cashable
- Assume non-cashable performance improvements included in CSIs and FP bureaux

HOB Readiness

There will be one-off savings in preparing for HOB readiness through aggregation. There will be:

- Fewer sites with fewer staff to engage and prepare, for example, in how to make best use of the new matcher algorithm, this is a non-cashable benefit
- Fewer sites with fewer IT systems and integration points this is a non-cashable benefit
- Fewer items of hardware that need upgrading, this is a cashable benefit

Optimise FP processes

Once the bureaux have been aggregated and connected and the FCN is in place to manage the network, then there will be scope to rationalise the management and other overheads associated with the bureaux e.g. training, recruitment etc. Standard operating procedures should also help to remove unnecessary or ineffective tasks.

The cost of the bureaux overheads is about £3.5m, so assume a 15% improvement as the base costs have improved by over 25%, delivering approximately £.5m p.a. cashable benefit.

Second round effects

Second round effects could include:

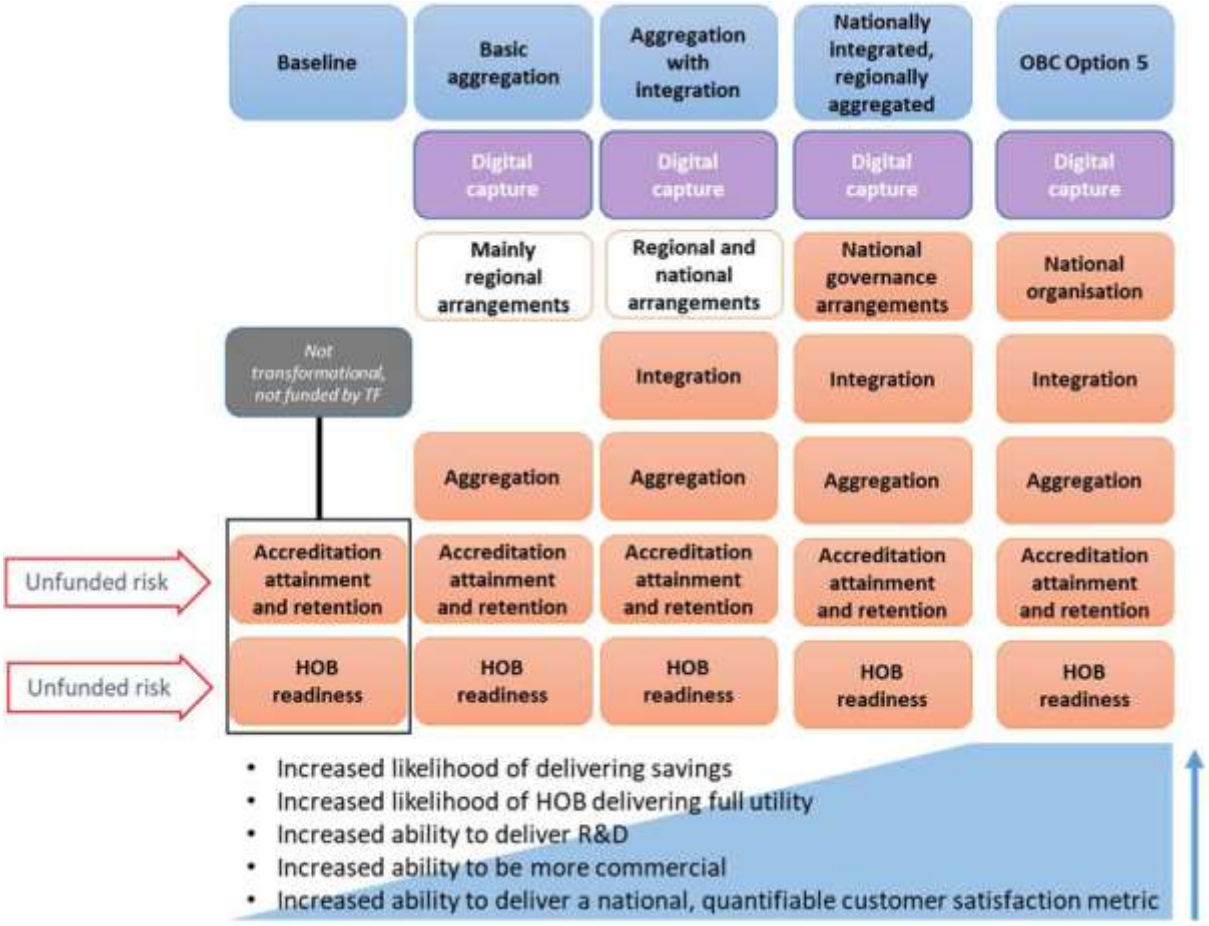
- Increasing the size of existing collaborations so that further efficiencies become available to the already efficient forces. EMSOU have identified some areas where this could apply e.g. training.
- Reducing the space occupied by a lab or bureau may enable further rationalisation to take place
- Changing working practices may contribute to other rationalisations of estates, back-office or operational deployment.

At this stage, some of these potential benefits have been identified, but they are likely to be worthwhile in value rather than critical and no separate calculation has been made so far.

Revenue generation

Currently bureaux such as EMSOU carry out some forensic services for smaller forces such as the Guernsey and Jersey. The Fingerprint Capability project will enhance the ability to compete for these services and for services to other territories – assuming digitisation is more widely adopted – and also for the private sector. The value of these services, most of which should be possible to deliver at marginal cost, has not been estimated. The values should be worthwhile, but are not critical to any argument in the business case.

Figure 12 Main benefit groupings



3.6.4 Benefits of each option

Financial cash releasing benefits

The table below shows how cash releasing benefits vary by option and grow overtime

Table 5 Financial cash releasing benefits

Option	2018/19 £'000s	2019/20 £'000s	2020/21 £'000s	2021/22 £'000s	2022/23 £'000s	Total benefit £'000s	% of highest benefit	Rank
Option 1	-	-	-	-	-	-	0%	**8**
Option 2a: 9+1, aggregation	385	1,529	8,954	9,328	9,328	29,523	68%	**6**
Option 2b: 9+1 aggregation with integration	385	1,924	10,566	11,062	11,062	34,998	81%	**3**
Option 2c: 9+1 aggregation, integration and FCN	385	2,304	13,124	13,761	13,761	43,334	100%	**1**

Option	2018/19 £'000s	2019/20 £'000s	2020/21 £'000s	2021/22 £'000s	2022/23 £'000s	Total benefit £'000s	% of highest benefit	Rank
Option 3a: 7+1, aggregation	385	890	5,373	9,386	9,386	25,419	59%	**7**
Option 3b: 7+1 aggregation with integration	385	1,231	6,666	11,120	11,120	30,521	70%	**5**
Option 3c: 7+1 aggregation, integration and FCN	385	1,555	8,923	13,819	13,819	38,501	89%	**2**
Option 4: 3 hub, unified, integrated separate service	385	1,672	4,436	13,521	13,521	33,535	77%	**4**

There is a notable difference between the highest cashable savings generating option, option 2c and the next two nearest options, option 3c and 2b.

Financial non-cash releasing benefits

The table below shows how non-cash releasing benefits vary by option and grow overtime.

Table 6 Financial non-cash releasing benefits

Option	2018/19	2019/20	2020/21	2021/22	2022/23	Total benefit	% of highest benefit	Rank
Option 1	-	-	-	-	-	-	0%	**8**
Option 2a: 9+1, aggregation	535	840	2,915	3,046	3,046	10,382	78%	**4**
Option 2b: 9+1 aggregation with integration	535	879	3,377	3,528	3,528	11,848	89%	**2**
Option 2c: 9+1 aggregation, integration and FCN	535	919	3,838	4,010	4,010	13,313	100%	**1**
Option 3a: 7+1, aggregation	535	595	1,636	3,046	3,046	8,859	67%	**7**
Option 3b: 7+1 aggregation with integration	535	603	1,912	3,528	3,528	10,107	76%	**5**

Option	2018/19	2019/20	2020/21	2021/22	2022/23	Total benefit	% of highest benefit	Rank
Option 3c: 7+1 aggregation, integration and FCN	535	610	2,188	4,010	4,010	11,354	85%	**3**
Option 4: 3 hub, unified, integrated separate service	535	610	401	3,838	3,838	9,223	69%	**6**

The analysis of non-cash releasing benefits shows a different picture to that of cash releasing benefits, but option 2 still delivers significantly higher non cash-releasing benefits over five years than the next best option.

This shows that the benefits outweigh the costs for each increment. That is to say, integration add benefits to aggregation that are worthwhile; and the national arrangements (the FCN) add value to integration. The analysis also shows that without TF, forces would be carrying unfunded risk, which is likely to be substantial for acquiring and maintaining accreditation. Some organisations expect to spend 15% of their turnover on this.

While Option 4 may offer further savings it is not only already deemed to be unacceptable, but it would also take longer to implement (requiring consolidation to three hubs and setting up a completely new management body). A delay of one year in implementation would cost about £14m in lost savings, this is not as good as the FCN option as it will not pay back that loss in a reasonable timeframe.

3.6.5 Assessing non-financial but quantifiable and qualitative benefits

The Fingerprint project will deliver quantifiable but non-financial and qualitative benefits. Although hard to ascertain their value, these benefits are important and can help in making the choice between competing options. To support this goal, such benefits were discussed and scored by a panel of project, forensic and fingerprint experts to reach an agreed score between 0 (no benefit) and 5 (maximum available benefit) for each option. The scores for the benefits by option were totalled and ranked based on the percentage of the highest score. The results of this analysis are presented in The table below shows how non-cash releasing benefits vary by option and grow overtime.

Table 6 Financial non-cash releasing benefitsTable 7 Non-financial quantifiable benefits and Table 8 Qualitative benefits.

Non-financial quantifiable benefits

Table 7 Non-financial quantifiable benefits

Option	Non-financial quantifiable benefit score	% Highest score	Rank
Option 1: baseline	0	0%	**8**
Option 2a: 9+1, aggregation	8.5	39%	**7**
Option 2b: 9+1 aggregation with integration	14	64%	**5**

Option	Non-financial quantifiable benefit score	% Highest score	Rank
Option 2c: 9+1 aggregation, integration and FCN	21.5	98%	**2**
Option 3a: 7+1, aggregation	9.5	43%	**6**
Option 3b: 7+1 aggregation with integration	15	68%	**4**
Option 3c: 7+1 aggregation, integration and FCN	22	100%	**1**
Option 4: 3 hub, unified, integrated separate service	21	95%	**3**

There are significant opportunities to generate non-financial quantifiable benefits, the main drivers for non-financial quantifiable benefits are improved customer service, improved victim satisfaction and the scope to increase the value of R&D investment and revenue from non-NPCC sources. It is recommended that as part of the on-going benefits management work being undertaken across the programme, efforts continue to find new information which would enable some of these benefits to be turned into cash or non-cash-releasing. This business case has taken a prudent view, rather than risk over-stating the cashable benefits case.

Qualitative benefits

Table 8 Qualitative benefits

Option	Benefit score	% Highest score	Rank
Option 1: baseline	2	5%	**8**
Option 2a: 9+1, aggregation	15	39%	**7**
Option 2b: 9+1 aggregation with integration	27.5	72%	**5**
Option 2c: 9+1 aggregation, integration and FCN	38	100%	**1**
Option 3a: 9+1, aggregation	15.5	41%	**6**
Option 3b: 9+1 aggregation with integration	28	74%	**4**
Option 3c: 9+1 aggregation, integration and FCN	38	100%	**1**
Option 4: 3 hub, unified, integrated separate service	37.5	99%	**3**

There are significant opportunities to generate qualitative benefits, the main drivers are around improving resilience of the fingerprint service, reducing risks around continuity and service outage, improved MI and better workforce management. It is recommended that as part of the on-going benefits management work being undertaken across the programme, efforts continue to find new information which would enable some of these benefits to be turned into non-financial quantifiable, cash or non-cash-releasing.

3.6.6 Summary of key observations and findings for non-financial benefits

In conclusion, the above analysis indicates that the impact of having 7+1 or 9+1 hubs has little impact on the non-financial benefits case but that the national governance of the system through the FCN is of great importance in optimising the benefits available through aggregation and integration.

A fuller breakdown of the non-financial benefits generated by the project can be found in Appendix 3 Non financial benefit assessment.

3.6.7 Estimating costs

The costs of delivering the project options have been estimated by experienced members of the TF team, recognised for their knowledge of the areas they have responsibility for costing. There are five main categories of cost for this investment:

Cost type	Cost item	Comment
Implementation project resource costs	The Delivery Team resources, this team will be police-led and consist primarily of cohort resources seconded to the project	These costs have been estimated by the programme's experienced project delivery team based on current market knowledge of resource rates, the costs of secondees, experience of the scale and nature of expenses likely to be incurred and project implementation.
Technology implementation resource	Likely technology implementation roles include: cloud dba, BI analyst / developer, developer, tester, agile manager, technical security, controller, legal advisor, pen tester, network security engineer, app developer, specialist (e.g. Norton), technical business analyst, cloud engineer, network engineer, technical business analyst, cloud architect	These costs have been estimated by the programme's experienced Technical Design Authority (TDA) based on current market knowledge.
Implementation hardware / capital / upfront equipment costs	Likely implementation hardware / capital / upfront equipment includes: integration connectors, cloud service bus, forensic service API management, bandwidth, cloud services router (CSR), network load balancing, VPN gateway, firewalls, external IP resource management data store - blob - hot - active/active, data store - blob - cool - active/active, data store - blob - archive / backup, content delivery network, application backup, application hosting (active/active)	These costs have been estimated by the programme's experienced Technical Design Authority (TDA) based on current market knowledge.
Operating technology costs	Estimated costs items include: integration connectors, cloud service bus, forensic service API management, bandwidth, cloud services router (CSR), network load balancing, VPN gateway, firewalls, external IP resource mgmt., data store - blob - hot - active/active, data store - blob - cool - active/active, data store - blob - archive / backup, content delivery network, application backup, application hosting (active/active)	These costs have been estimated by the programme's experienced Technical Design Authority (TDA) based on current market knowledge, previous implementation experience, investigating publicly available list prices and through discussions with market participants.

Overarching costing assumptions

- Cohort resources will be used to deliver the project in forces supported by specialists where necessary
- The project will be police-led
- Costs for technology are largely derived from online supplier calculators combined with market intelligence and vendor advice
- Costs for implementation are based on known salary band costs for Force resources and day rates for contract staff based on recent market intelligence and procurement exercises
- Technology costs assume an "as a service" approach to provision, and therefore upfront capital costs are low
- Estimates are based on use of Web-based applications and / or integration with existing on-site networked fat clients
- Elements of the services will rely on integration with local force systems. Provision for integration work and technology (connectors, gateways, etc.) is included in this model. However, the assumption is that local IT will facilitate any extension of Fingerprint Capability virtual networks to their location.

3.6.8 Costs for each option

The TF Financial Model sets out the costs for the shortlisted options phased over the duration of the investment. All the options have the same or similar core activity – aggregation of bureaux into fewer large hubs, this is the most resource intensive activity in the project, consideration of the impact of aggregating to 9 hubs or 7 hubs indicated no material difference in the project resource required: whilst moving to 7 hubs means fewer sites for transition, any saving here is likely to be offset by an increase in the complexity of the move to fewer, larger sites compared 9 hubs which more closely reflect existing collaborations and the standard regions.

Aside from implementation resource the largest cost category is IT. The cost of integration (options 2b and 3b) would be the same with or without the FCN added by options 2c and 3c. Options 2a and 3a would not incur the same IT costs as the other options, however, each aggregation would need to implement a similar solution within its region, at least until the aggregation fully operational from a single site.
Experience from YatH and EMSOU indicate IT costs in aggregation are not inconsiderable.

Taking the above into consideration when modelling the options it was been deemed prudent to assume implementation costs would not be materially different across the options.

3.6.9 Net present value findings

The Net Present Value (NPV) is the difference between the present value of cash inflows and the present value of cash outflows. It is a key economic measure which demonstrates whether a project or an option delivers a good return on the investment. The figures below refer to costs and benefits delivered over five years.

	Economic costs	Economic benefits	Net cost / (benefit)	Net present value	Rank
Option 1: Baseline	-	-	-	-	**8**
Option 2a: 9+1, aggregation	(27.1)	39.9	12.8	10.8	**6**
Option 2b: 9+1 aggregation with integration	(27.1)	46.8	19.8	17.1	**3**
Option 2c: 9+1 aggregation, integration and FCN	(27.1)	56.6	29.6	25.9	**1**
Option 3a: 9+1, aggregation	(27.1)	34.3	7.2	5.5	**7**
Option 3b: 9+1 aggregation with integration	(27.1)	40.6	13.6	11.2	**5**
Option 3c: 9+1 aggregation, integration and FCN	(27.1)	49.9	22.8	19.5	**2**
Option 4: 3 hub, unified, integrated separate service	(27.1)	42.8	15.7	13.0	**4**

3.6.10 Summary of key observations and findings for the NPV assessment

The table above shows a positive investment case for all options (except for option 1 Do Nothing), however it is particularly compelling for option 2c (delivering £25.9m net present value), followed by option 3c (delivering a £19.5m net present value).

3.7 Risks

3.7.1 Risk appraisal methodology

Risk appraisal has been undertaken with a panel of project, forensic and fingerprint experts to identify the strategic risks for the project and reach an agreed probability and impact score of the risks for each option, a final risk score was calculated by multiplying probability and impact scores. All of the risks identified are set out in Table 3 Strategic risks.

The range of scores used to quantify risk was as follows:

- 0 – not a relevant risk
- 1 – a very low probability of the risk occurring or a very low impact if the risk was realised

- 5 – a very high probability of the risk occurring or a very high impact if the risk was realised

The scores for the risks by option were totalled and ranked based on the percentage of the highest score. The results of this analysis are presented in The table below shows how non-cash releasing benefits vary by option and grow overtime.

Table 6 Financial non-cash releasing benefitsTable 9 Risks

Table 9 Risks

Option	Risk score	% Highest score	Rank
Option 1: Baseline	98	95%	7
Option 2a: 9+1, aggregation	96.75	94%	6
Option 2b: 9+1 aggregation with integration	83	81%	4
Option 2c: 9+1 aggregation, integration and FCN	60	58%	1
Option 3a: 7+1, aggregation	103	100%	8
Option 3b: 7+1 aggregation with integration	88.5	86%	5
Option 3c: 7+1 aggregation, integration and FCN	66	64%	2
Option 4: 3 hub, unified, integrated separate service	78.5	76%	3

3.7.2 Summary of key observations and findings for the risk assessment

This risk assessment indicates option 2c has the lowest overall risk score followed by option 3c. As with the non-financial benefits, it is the difference between the 'a', 'b' and 'c' options (aggregation only, aggregation with integration and aggregation with integration and the FCN) which is most notable. However, there is also a consistent difference in scores between options 2 (9+1) and 3 (7+1), with the assessment panel considering the overall risk of option 3 greater than that of option 2; this as driven largely by the increased levels of staffing, decant and construction risks resulting from increased levels of change and scale of movement of staff.

A fuller breakdown of the risks generated by the project can be found in Appendix 4 Risk assessment

3.8 Optimism bias

The business case considers optimism bias: the tendency for projects to overstate benefits while understating costs and the timescales required. The Green Book guidance on the drivers of optimism bias cannot be readily applied to these proposals (the values are developed from construction, IT projects etc. based on experience dating from the 1990s), so the assessment has considered how far the risks to collaboration are mitigated.

Optimism bias looks at the extent to which the inherent project risks and the external influences have been mitigated (i.e. risks beyond those already reflected in the calculation of the NPV). The optimism bias assessment used for the programme takes the headings from the Green Book where these are relevant for the project and external risks but has added risks derived from the HMIC report[8] on the role of collaboration in delivering efficiency in the police service. This report identified six barriers to and enablers

[8] HMIC, Increasing efficiency in the Police Service the role of collaboration, 2012

of collaboration, drawing on previous work of the NPIA. The assessment indicates that the differences in unmitigated risk are unlikely to change the assessment of which option has the best NPV.

For more detail on the approach to optimism, see the Programme Business Case.

3.9 Analysis of key results

Table 10 Critical success factor scoring

	Strategic Fit	Operational Efficiency	Operational Effectiveness	Resilience	Availability of current, FP specialist techniques	Achievability	Acceptability	HOB Ready	R&D and Innovation	Affordability to Forces	Skilled, Professional and Accredited Workforce	Total score	% of Highest Score	Rank
Option 1	0	1	1	0	2.5	1	3	1	1	1	2	**13.5**	**27%**	**8**
Option 2a	1	3	3	1.5	3.5	4.5	3.5	3.5	2	3	2.5	**31**	**61%**	**7**
Option 2b	3	3.5	3.5	4.5	4	4	3.5	4	2.5	3.5	3	**39**	**77%**	**5**
Option 2c	5	4	5	5	5	3	3	4.5	5	4	5	**48.5**	**96%**	**2**
Option 3a	1	3	3	1.5	3.5	4.5	3	4	2	3.5	2.5	**31.5**	**62%**	**6**
Option 3b	4	4	3.5	4.5	4	4	3	4.5	2.5	4.5	3	**41.5**	**82%**	**4**
Option 3c	5	5	5	5	5	3	2.5	5	5	5	5	**50.5**	**100%**	**1**
Option 4	5	5	5	5	5	0	0	5	5	4	5	**44**	**87%**	**3**

When assessed against project critical success factors options 3c closely followed by 2c are clearly the highest scorers. Option 4 scores well overall, however the scoring highlights two significant adverse areas: achievability and acceptability, the zero scores are in effect red flags that would prevent the option being taken further. It is also worth noting that, although options 2a, 2b, 3a and 3b score less than option 2c and 3c they still score positively overall, particularly the 'b' variants, indicating that in the absence of the FCN these options should still be considered for progression.

3.10 The preferred option

The results of investment appraisal are as follows:

Table 11 summary of overall results

Evaluation Results	Economic appraisals	Critical success factors	Non-financial benefits appraisal	Risk appraisal
Option 1: Baseline	8	8	8	7
Option 2a: 9+1, aggregation	6	7	7	6
Option 2b: 9+1 aggregation with integration	3	5	5	4
Option 2c: 9+1 aggregation, integration and FCN	1	2	2	1
Option 3a: 7+1, aggregation	7	6	6	8
Option 3b: 7+1 aggregation with integration	5	4	4	5
Option 3c: 7+1 aggregation, integration and FCN	2	1	1	2
Option 4: 3 hub, unified, integrated separate service	4	3	3	3

Based on the economic assessment above option 2c is recommended as the preferred option. What the analysis undertaken as part of the economic assessment shows clearly is that the number of hubs does not have a material impact on costs and benefits (assuming the number does not vary much from the 9+1 or 7+1 variants which have been examined in detail here. The real differentiator in terms of benefits available for realisation is that the fingerprint capability solution delivers aggregation, integration and the Forensic Capability Network to provide cohesive national guidance which will enable benefits to be optimised. This economic analysis is based on the current 44 policing organisations participating in TF, it is important that as many forces participate as possible to deliver a truly national solution able to deliver optimised benefits reaping the gains from aggregation and integration.

4. The Commercial Case

4.1 Introduction

The commercial case sets out the commercial implications of the preferred option. It considers whether the preferred option is attractive to the market place, can be procured and is commercially viable, with future charging mechanisms and procurement strategy. The case concludes with a description of the existing contractual arrangements that will need to be considered. In this business case, none of the options rely on creating a new market for services or assumes a major procurement process.

4.2 Required services

Type of product / service	Product / service required
Technology components	• integration connectors • cloud service bus • forensic service API management • bandwidth • cloud services router (CSR) • network load balancing • VPN gateway • firewalls • external IP resource management • data store - blob - hot - active/active • data store - blob - cool - active/active • data store - blob - archive / backup • content delivery network • application backup • application hosting (active/active)

Type of product / service	Product / service required
Implementation resource	• Cloud architecture & solution design - cloud architect • Cloud infrastructure, data management & BCDR configuration - cloud engineer • Cloud & network security configuration & tuning - network security engineer • Cloud & network security assurance - technical security controller • IAMS configuration & synchronisation - users, roles - technical security controller • Key management - technical security controller • Penetration testing - pen tester • Agile delivery - agile delivery manager • Service & process configuration - technical business analyst • Business service analysis - technical business analyst • Integration development: force systems, HOB, etc. - developer / integration engineer • app dev (e.g. modify CSI upload to go to cloud) - app developer • system tester - tester • Business Intelligence(BI) dashboard configuration - BI analyst / developer
Operating resource	The types of role required for operation would be the same as those for implementation

4.3 Potential for risk transfer

The Fingerprint service will be delivered entirely "in-house". The technical infrastructure will be bought from commercial organisations but beyond the standard terms and conditions and guarantees there is no opportunity to transfer risk away from the service.

This is not unexpected given the nature of the service being developed, the services required for purchase and the prevailing thinking on how to obtain best value from money in digital service development. Risk transfer usually comes at significant up-front cost and involves outsourcing technical design, build and operation to a third party. However, ultimately it has been proven through experience that it is the public sector organisation which has to resolve issues, with limited recourse to contractual remedies.

The recommendation of this business case is that the lower costs, increased flexibility and more agile response to development through an in-house service using standard commercial hardware, software and hosting will off-set any increased risk allocated to the public sector to deliver the best value for money.

4.4 Commercial principles

The Fingerprint Capability project will seek to follow established policy, principles and guidelines to achieve competitive, value for money commercial and service outcomes. At a high level these principles will include satisfying the following:

- EU Public Procurement Regulations and Policy Directives where relevant
- National Police Chiefs Council (NPCC) Commercial & Procurement Policy
- Collaborative Law Enforcement Procurement (CLEP) Programme
- NPCC Information Management and Operational Requirements Committee
- Home Office Commercial Policy & Architectural Principles (to the extent they apply to NPCC Police led programmes)
- Standards and Codes of Practice set by the Forensic Science Regulator

- Wider Government Commercial Policy including Government Supplier Standard[9]

Any variation from these broad principles will be subject to business justification underpinned by the relevant evidence base and governance.

4.5 Procurement strategy and implementation timescales

4.5.1 Proposed charging mechanisms

A range of charging models will be applied based on the nature of individual product and service contracts. Given the scope of component services involved in delivering the preferred option, it is likely that the full range of models will be applied to different transactions. For complex transactions, a range of models may be applied within a single contract. The most commonly used charging mechanisms to be deployed will include:

- Catalogue-based unit pricing for standard products and services (fixed and variable)
- Project-based transition and transformation charges
- Managed service charges and fees
- Capacity-based annual or quarterly fees, subject to agreed volume tolerance
- Licence fees charged to individuals or groups of users
- Professional service charges (time and materials based).

4.5.2 Proposed approach to contract management

General Public Procurement policy in recent years has driven toward shorter contract durations for smaller packages of work. This is intended to encourage regular competition, encourage adoption of industry standard cloud-based solutions, acquisition via multi-tenanted framework contracts and marketplace, and to reduce the incidence of bespoke project-based investments, which create long term supplier lock in. Such arrangements will typically apply to the more commoditised service requirements. In these instances, a project contract term or call off award of 1–3 years may be appropriate. Framework contracts will typically have a term of three to four years, but may be longer if clearly stated at OJEU Notice stage and commercially justified.

In more complex cases longer contract durations may be appropriate. These contracts will typically involve complex collaboration, a degree of project specific authority or supplier-based investment required to deliver the service, and a period of transition and or transformation. The recently awarded Metropolitan Police Service (MPS) contracts for forensic services[10] are examples of such a contract awarded on the basis of a term of seven years with further options to extend up to ten years. In the case of the MPS, the case for such a long contract has been justified on the grounds of building a deeper relationship which delivers mutual benefit and seeds confidence to invest in research and innovation. The recently awarded (East Midlands Special Operations Unit (EMSOU)[11] collaboration contract establishes a similar term. Where longer contract durations are contemplated, key contract terms need to reflect the balance of risk. Key areas to be considered are reflected below.

4.5.3 Proposed key contractual clauses

No single contracting model will apply to all elements of the preferred option solution. In general, Transforming Forensics will seek to apply established police precedent terms and conditions based on existing collaborative contracts or police model contracts. Where value for money and service specifications are assured, the solution will seek to re-use existing collaborative contracts and frameworks, including those made available via the Home Office or Crown Commercial Service (E.g. Digital

[9] https://www.gov.uk/government/consultations/supplier-standard-for-digital-and-technology-service-providers
[10] MPS OJEU Notices, 2015 http://www.government-online.net/provideforensics-service-to-metropolitan-police/ http://www.government-online.net/provide-digitalforensics-managed-service-to-metropolitan-police/
[11] EMSOU -FS Tender for the Supply of Regional External Forensic Service Provision 2016

Marketplace). This approach reflects the key pillars of the NPCC Collaborative Law Enforcement Procurement Programme, i.e. standardisation, aggregation, and collaboration with strategic supplier relationship management.

For more bespoke contracts the project will investigate the most appropriate route which could be through existing frameworks or the Crown Commercial Service, but could also include the Government Model Service Contract (MSC)[12]. The MSC forms a set of model terms and conditions for major service contracts that are published for use by government departments and other public sector organisations. The MSC reflects current government priorities and recommended ways of doing business. The model aims to aid assurance, reduce administration, legal costs and negotiation time. The MSC is suitable for use with a wide range of business services that public sector organisations purchase and contains applicable provisions for contracts for business process outsourcing and or IT delivery services. The MSC is widely recognised by industry, and can generally be modified to ensure its provisions are appropriate and proportionate to the business opportunity.

Contracts intended to support complex transformational requirements, potentially for a longer time period, require specific key clauses to reflect the risk profile of the transaction and the allocation of responsibilities. In the context of the preferred option, the following key contract clauses and risk areas will require careful consideration in the context of both current and future procurement arrangements:

- Financial and charging model, price reviews and value for money transparency
- Assurance and Accreditation standards (including those set by the Forensic Science Regulator)
- TUPE obligations
- Service development and innovation provisions
- Delivery milestones (transition and transformation plan) and incentives
- Service Level Agreements and performance management
- Strategic Supplier Relationship management
- BCDR
- Security and Protection of Data & Confidentiality
- Service Credits & Incentivisation clauses
- Open Book Accounting/Company finances monitoring/Parent Co Guarantees

4.6 Personnel implications (including TUPE)

This area has not been assessed at present as in order to review TUPE considerations confirmation of a Transforming Forensics Programme force cohort would be required (so that the forces and therefore personnel could be determined). This area therefore needs a more thorough review of preferred option content by force FTE, mapped to the end state and anticipated future structure. In the absence of any other NPCC and HO corporate template, the ACAS and Government UK guides contain appropriate guidance and templates.

4.7 Financial reporting standard (FRS) 102[13] accounting treatment

FRS 102 (which superseded FRS 5) addresses the problem of what is commonly referred to as 'off balance sheet financing'. One of the main aims of such arrangements is to finance an organisation's assets and operations in such a way that the finance is not shown as a liability in the organisation's balance sheet. A further effect is that the assets being financed are excluded from the accounts, with the result that both the resources of the entity and its financing are understated.

FRS 102 requires that the substance of an entity's transactions is reported in its financial statements. This

[12] Government Model Service Contract (MSC) https://www.gov.uk/government/publications/model-services-contract
[13] FRS 5 has been superseded by FRS 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland for accounting periods beginning on or after 1 January 2015

requires that the commercial effect of a transaction and any resulting assets, liabilities, gains and losses are shown and that the accounts do not merely report the legal form of a transaction.

There are no implications for FRS 102. This project is not creating any assets or capitalising any expenditure.

4.8 Pricing, cost and benefit sharing mechanism in the future

4.8.1 Introduction

The preferred option will see the development of harmonised services and a Forensic Capability Network (FCN), that are accessible and available to all law enforcement bodies, on a 24/7 basis where required. This will involve the creation of a small team to support the operational delivery of the FCN, as well as a technical solution to provide the necessary infrastructure to join up capabilities, and to focus on those elements that benefit from a single national approach, such as accreditation; validation of scientific process and tools; research and development and procurement. This FCN oversight team and infrastructure is estimated to require ongoing funding of £5m per annum from 2020.

In order to fund the FCN and infrastructure and ensure equitable attribution of service costs and transformation benefits it will be necessary to create a new internal charging model.

The details of the charging model will be developed in collaboration with the cohort forces once approval to proceed is received and the programme has a more certain picture of the final cohort members, and how the transformation will be implemented in practice. However, considerable thought has been given to the likely approach as set out below.

4.8.2 Guiding principles for fingerprint charging

The future charging model must be:

- Simple, equitable and sustainable
- Allow for full cost recovery to cover future investments, for example in technical refresh costs and the cost of service development and improvement
- All participants will share the costs and benefits and risks proportionately and provide value for money
- There will be a clear contractual basis to the charging model
- Underpinned by legal agreement

To facilitate this the charging model will be based on sound understanding of:

- Different cost types, e.g. fixed, stepped and variable
- Future capital investments
- The variable impact of benefits and risk reductions on different programme participants
- The impact of charging mechanisms on demand behaviour

And will include:

- Clear service level agreements
- A mechanism for review with rebates when necessary
- Service charge adjustments at agreed points

4.8.3 Different charging approaches

Taking a simple unit based pricing can drive the wrong outcomes, the negative impacts of this approach include:

- The risk that every service request is seen as a controllable or avoidable cost, thereby dis-incentivising users to use the service
    - The service is not delivering the value to the CJS system that is the driving force behind the programme

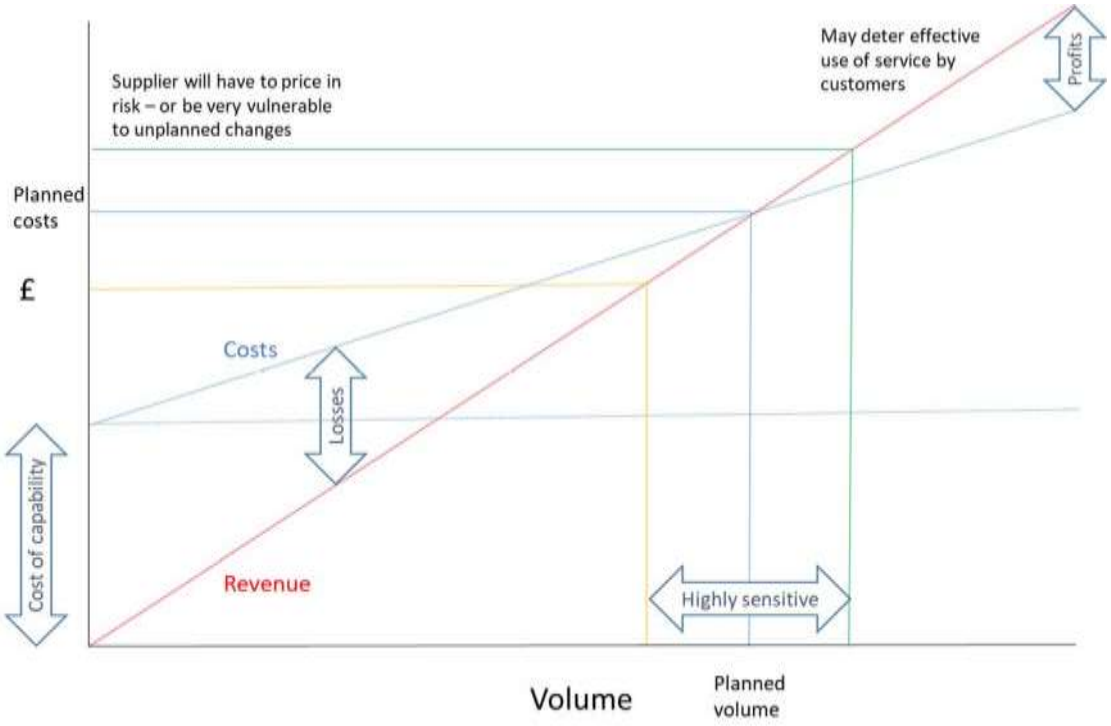
- There is a risk that, if volumes of requests drop significantly below planned / expected, the resulting fees paid may fail to cover even fixed costs and or the cost to re-invest in the service (resulting in a negative cycle)
- Those using the service as expected end up paying for the capability to be available for those not using (and therefore not paying for) the service, but for whom there is a known need to be able to access such a service in certain scenarios or eventualities

- The unit cost of a service request is highly sensitive
  - If it is set too low, fees paid could fail to cover costs and demand for the service could rise above planned capacity impacting on costs and customer service
  - If it is set too high it could lead to surplus revenue (a notional 'profit') which the FCN is not intending to generate or demand could fall reducing the value of forensics to the CJS, and perversely reducing the level of income below that required to cover costs

These are a few examples of the issues arising from a unit charging approach in a complicated set of customer and provider interactions.

Figure 13 Unit charging diagram below sets out the difficulties posed by unit charging.

Figure 13 Unit charging diagram



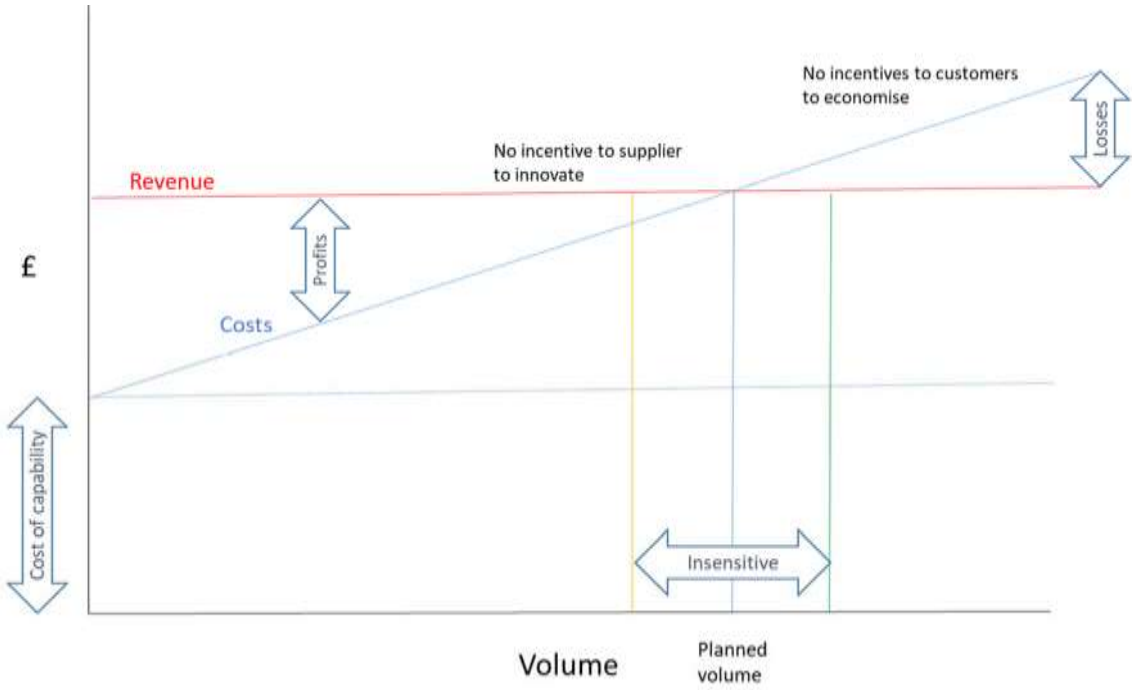
Can the FCN take a fixed price approach to remove the risks of unit charging? Superficially taking a straightforward fixed price approach can seem more appealing, budget holders know what their costs will be and the provider can be sure their fixed costs are covered. However, such an approach can drive different but similarly negative outcomes, including:

- The perception that the service is unlimited, having paid the fixed fee, so there is no incentive for users to economise, resulting in large numbers of service requests being made, far larger than currently submitted, which will:
  - Drive up costs of the service and result in the fixed fee failing to cover in year costs and leading to a far higher fixed fee the following year
  - Drive down response times and other customer service indicators impacting on SLAs and negatively affecting CJS outcomes

- Conversely, there is no incentive for the provider to innovate and drive down costs, safe in the knowledge that, on planned volumes, its costs will be covered

Again, these are a few examples of the issues arising from a fixed charging approach in a complicated set of customer and provider interactions. Figure 14 Fixed charging diagram below sets out the difficulties posed by fixed charging.

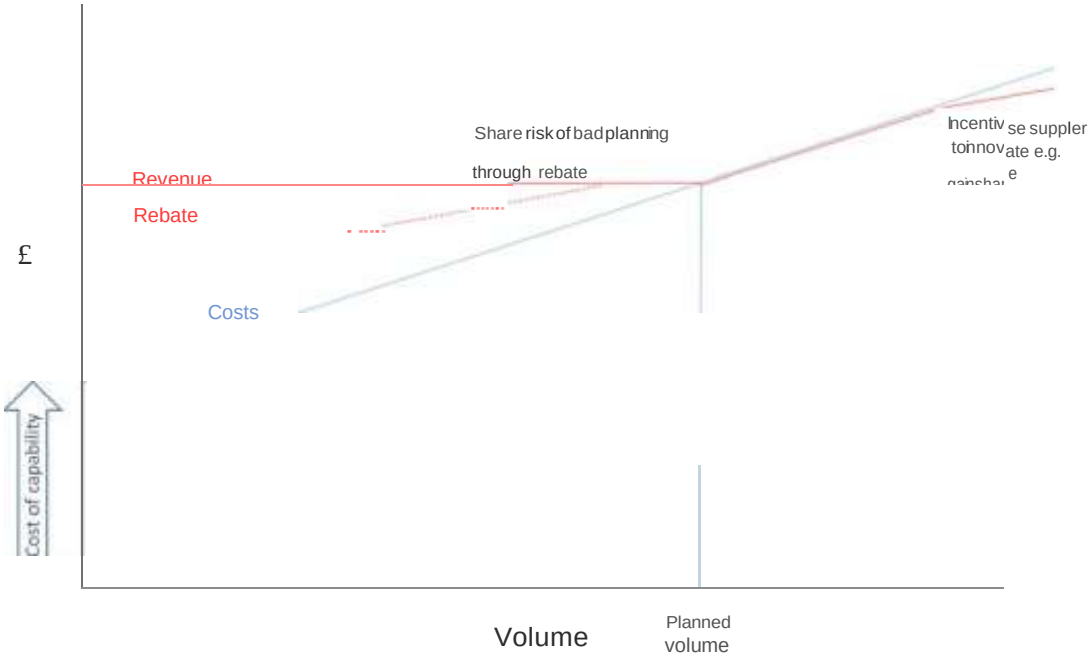
Figure 14 Fixed charging diagram



In light of the issues identified with the above approaches it is recommended that a hybrid fixed and unit charge model is developed and adopted. This will consist of a low annual "membership fee". This will be a fixed amount designed to cover the fixed costs, supplemented by a "pay as you go" unit charge to cover each service/transaction (each crime scene mark or case, each identification report, evidence pack, SFR etc.).

This has a number of advantages as set out in Figure 15 Hybrid fixed and per unit charging diagram below. This approach will require careful planning and cost analysis and demand forecasting, however it should overcome many of the issues identified in the unit charge only or fixed charge only approaches.

Figure 15 Hybrid fixed and per unit charging diagram


Share risk of bad planning
through rebate
Incentiv se suppler
toinnov ate e.g.
Revenue
Rebate
£
Costs
Cost of capability
Volume
Planned
volume

5. The Financial Case

5.1 Introduction

This section evaluates the affordability of the preferred option that emerged from the Economic Case.

5.2 Affordability analysis assumptions

The following assumptions have been made when considering affordability of organisations that incur costs as a consequence of this investment:

- Contingency – a contingency sum is included to meet the costs of risks that materialise, noting that significant changes of scope will need to be the subject of a subsequent variation business case
- Irrecoverable VAT – as VAT goes to HM Treasury, it has no effect on the Public Sector as a whole and so is not relevant to the economic analysis. VAT is assumed to be fully recoverable.
- Inflation has been set to zero up to March 2020 (and will be managed by the programme, from 2020/21 onwards inflation is based on the OBR CPI forecast rate or 2%
- All implementation technical and resource costs for the Fingerprint Capability project will be funded by the programme; the cost of redundancy will be funded by forces, but is assumed to be less than the cost of employment over a year (i.e. on average, redundancy payments will not exceed a year's salary), and therefore affordable within current budgets.

5.3 Impact on income and expenditure accounts

	2018/19 £'000s	2019/20 £'000s	2020/21 £'000s	2021/22 £'000s	2022/23 £'000s	Total £'000s
One-off TF costs	(4,422)	(9,252)	-	-	-	(13,674)
One off Forces costs (Redundancy)	-	(3,382)	(3,690)	-	-	(7,072)
Ongoing costs	-	-	(4,556)	(4,648)	(4,740)	(13,944)
Gross Cost	(4,422)	(12,634)	(8,247)	(4,648)	(4,740)	(34,691)
Potentially Cashable Benefits	385	2,304	13,401	14,347	14,634	45,071
Net Cost / (Benefit)	**(4,037)**	**(10,331)**	**5,154**	**9,700**	**9,894**	**10,380**

5.4 Impact on the balance sheets

The Fingerprint Capability project is not building new assets. Some of the expenditure will be for equipment but this will not be a large amount and each item is likely to fall below the threshold permitting capitalisation. Most of the expenditure is on resources to implement the project, and even where these are working directly on the creation of the IT network it would not be prudent to assume they can be capitalised as no new system has been created (unlike, for example, the development of a new software programme). The project does not envisage any material impact on the balance sheet.

5.5 Overall affordability

The £30.35m funding requested by TF of the PRTB includes an amount of £13.7m for the Fingerprint Capability project which will ensure funding is available to execute the project to completion. The project is affordable.

6. The Management Case

6.1 Introduction

This section of the BC will demonstrate the "achievability" of the Fingerprint Capability as previously described. Its purpose is to set out the actions that will be required to ensure successful delivery, demonstrate TF's readiness to enact these, the organisational readiness to accept the change and describe the mechanisms the Programme will put in place to ensure strong project governance and reporting.

6.2 Programme management arrangements

The Fingerprint Capability project is a cornerstone of the Transforming Forensics Programme which comprises a number of projects for the transformation of forensics in England and Wales.

The programme is being delivered through the NPCC Forensic Portfolio and governed by an already established Executive Review Board with police and Home Office representatives, the APCC, the Forensic Science Regulator and other expert support, including academia.

A governance framework has been defined and is in place. Executive and programme boards are already established, and their roles and responsibilities defined. The Executive Review Board is jointly chaired by Chief Constable Debbie Simpson (the NPCC Lead for Forensics) and PCC Mark Burns-Williamson (the APCC Lead for Forensics). It reports through the Chief Constables' Council and the APCC. It also reports to PRTB in terms of performance against its funding grant.

Key governance roles currently in place include the APCC Sponsor, the Senior Responsible Owner (SRO), Programme Director, Programme Manager, Business Change Managers and the Programme Office. The multi-disciplinary programme delivery team put in place to support the TF Programme is providing specialist management support in programme delivery, control and technical and business design.

A Vision, Mission, Objectives, Strategy and Tactics (VMOST) exercise has taken place, aligned with themes such as creating a shared vision and stakeholder buy-in, creating a national sustainable capability, developing and inspiring people, and long-term sustainability.

For further detail on TF programme management arrangements please refer to the Programme Business Case.

6.3 Project management arrangements

The Fingerprint Capability project will be led by programme resources, including secondees from policing, with broad and in-depth knowledge of the subject area from both a forensics and policing perspective. The day-to-day management of the project will the responsibility of the Project Manager using regular checkpoints, highlight reports, risk, assumption, issues and dependencies (RAID) logs and action logs.

6.3.1 Methodology

The methodology for managing the project will vary with the nature of the activity being undertaken. It is likely that the methodology will include a combination of Managing Successful Programmes (MSP) and PRINCE2[14] standards, as well as Agile in particular for more technology focused elements of the project.

6.3.2 Status reporting

The Project Team already meets regularly to review progress, manage issues and prioritise tasks. This case assumes that the Project Team will continue to report key points of progress, issues and risks at an appropriate level for a senior audience. Similarly, this case assumes that the Project Team will also produce briefing notes and reports on an ad hoc basis, e.g. to inform decisions by the programme's governance boards.

6.3.3 Project roles and responsibilities

Table 12 Project roles and responsibilitie, sets out the known core project team to date with placeholders for expected roles yet to be filled.

Table 12 Project roles and responsibilities

Core Project team role	Name	Responsibility
Business Transition Lead	Kevin Morton	Managing the transition of forces through the project
Subject Matter Expert	Richard Small	Guidance and influencing marketplace
Project Manager	Heather Allen (interim)	Managing key deliverables
Project Manager - Police secondee	TBC	Managing inputs into police environment
Quality lead	Kevin Sullivan	Advice on quality standards and accreditation
Fingerprint Technical Lead	NPCC	Guidance on standardised processes
Operation Lead for Wave forces	TBC	Support rollout of operational process
HR advisor - TF	TBC by each force	Guidance/actions related to HR activities
TDA/BDA	Ken McNaught/ Sean McLellan	Technical design and business processes
Transition Managers	Garry Dixon, Jon Gadd, Sarah Smith	Management of in force stakeholders – pre, during and post implementation

[14] PRINCE2 (an acronym for PRojects IN Controlled Environments) provides accreditation and best practice guidance on effective project management and is used extensively by the UK Government and the private sector, both in the UK and internationally

Core Project team role	Name	Responsibility
Comms support	Sam Edwards	Management of communication activity
HOB link person	Richard Small	To ensure the project and HOB remain aligned

Once funding is agreed and this business case approved the programme will move rapidly to fill vacancies and replace interims with project specific resources. This core team will be supported by a number of other resources at different phases of the project.

6.3.4 Project plan

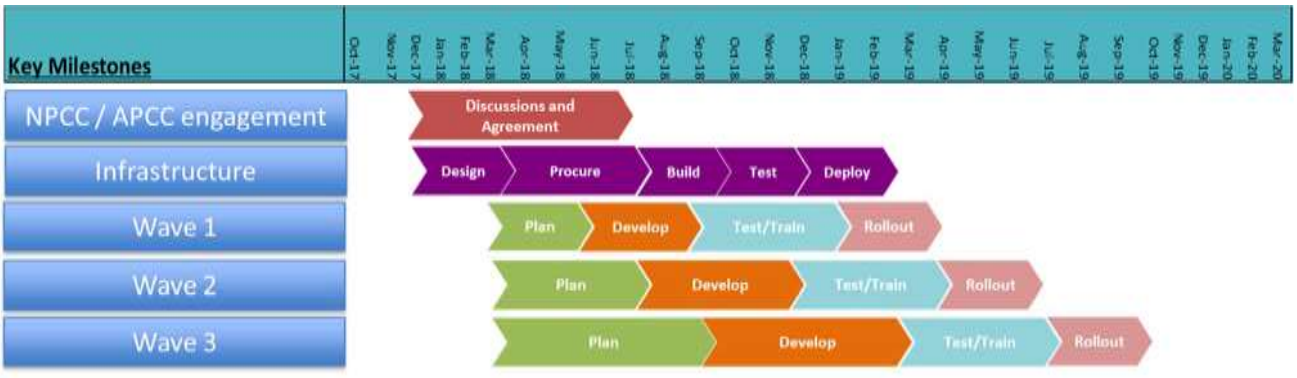
Overall Approach – Staged Delivery

Transforming Forensics, guided by the wishes of its 44 participating policing bodies, is taking a pragmatic and iterative approach to programme delivery, which will enable TF to deliver early benefits in a series of incremental changes. The Fingerprint Capability project is also adopting this approach to realise early deliverables and "quick wins" and build momentum on this initial success. The Fingerprint Capability project is therefore building upon existing foundations and recent innovation, in terms of strategic collaborations, partnering arrangements, where they are suitable, and channelling its energies into maximising opportunities for improvement.

The high level project plan set out in Figure 16 High level project plan, sets out the anticipated timeline for the project. There will be an initial period of engagement and consultation with the participating forces to agree the delivery plan and timings of each particular force over the next few months. In parallel work will begin on the technical infrastructure solution to ensure the project is ready and able to deploy rapidly and successfully once plans are agreed at the NPCC and APCC level.

Adopting the wave approach enables those forces able to move faster to do so and realise early benefits. It also allows the project to manage its resources more effectively by reducing peaks in demand for potentially scarce policing or forensic staff to support the project. Importantly, it enables later waves to learn lessons from the preceding waves, further de-risking potential disruption, cost and delays for the programme. It is important to note that all waves will be engaged at the same time, or as soon as practicable. This is to ensure no one is left behind and all forces wishing to participate can do so from day one, whilst recognising that some forces may need more support in the plan and developing stages.

Figure 16 High level project plan



6.4 Stakeholder management and communications

A Communications and Stakeholder Management strategy has been developed to support the Transforming Forensics Programme. The Fingerprint Capability project will work within the framework to ensure a joined up approach to stakeholder management and communications. It acts to support programme objectives by maintaining and increasing awareness and support for its work by building trust

and enhancing its reputation as a credible, evidence-based change programme amongst all identified stakeholders.

Stakeholders will be engaged according to their needs and programme requirements, aiming to:

1. Increase awareness of and support for the programme and build trust among all key stakeholders, with particular emphasis on cohort forces
2. Support development of the full business case and mobilisation of the programme
3. Establish and enhance Transforming Forensics' reputation as a credible, evidence-based change programme.

The project will be open and transparent, demonstrating a willingness to listen and adapt, as well as enthusiasm to engage in debate and receive feedback. Communication with stakeholders will take account of their preferences and demands on their time, understanding how and when they wish to communicate.

The Fingerprint Capability project will use the following programme resources and channels to ensure communication is effective, regular and timely, building on a powerful narrative of the vision and deliverables, adapting as needed to ensure that communications are effective. The project will develop and deliver:

- **Internal communications –** an internal communications plan to help ensure awareness of key activity among the Programme team and ensure that everyone gives and receives consistent messages
- **Transforming Forensics mailbox** – A bespoke mailbox to allow communication from the programme to identified stakeholders as well as two-way communication through a single, recognised and consistent point of contact
- **Website** – A bespoke, access controlled website will act as a repository of information about the programme including programme updates, project specific information, links to partner police reform work and other relevant information and documentation useful for stakeholders. All other correspondence will aim to signpost users to this site as a single information source. For public consumption information will be available on the APCC and NPCC websites
- **Newsletter** – Regular email updates will communicate relevant information to identified key stakeholders
- **Cohort workshops & events** – Building on the successful delivery of previous workshops, and using the feedback captured, dates will be set for a series of future events to update stakeholders on the developing work
- **Targeted briefings** – Identification of and securing buy-in for briefings to key stakeholders. These include Chief Constables' Council, general and regional Association of Police and Crime Commissioners (APCC) meetings and more
  Media / social media – Proactively engaging mainstream and trade media to promote the work of the Transforming Forensics Programme alongside the wider police reform agenda.
- **Attendance at key events** – Identifying and attending key policing events including, but not limited to, Joint NPCC / APCC Summit, College of Policing conference, Police Federation conference and Superintendents Association conference to engage and brief key audiences.

6.5 Training

There are seven key influences on the scope of the training service to be provided

1. The change in the College of Policing policy for forensics training, where a decision has been made to approve courses but not to deliver them
2. The remaining training capability within the forces, much of which has been disbanded over recent years
3. The scope of training to be provided by HOB, which is assumed to cover familiarisation with the new capability that is being delivered
4. The training required to support the transition activity

5. The need to encourage and inculcate new 'Ways of Working', aligned to the FSR Code of Conduct and Practice
6. The demographic profile of the target audience and the new ways of learning that are becoming prevalent
7. The requirement for training itself to be auditable in support of ISO17025 and 17020 accreditation (providing evidence that people are competent in their roles).

The Fingerprints training service will develop as follows:

- Execute a Training Needs Analysis of all forensic disciplines, from CSIs to FP Capability Managers, to establish the Training Objectives and subsequent Enabling Objectives. This will assume that the endorsed user requirements can be fully met and therefore understand the knowledge, skills and aptitude required to execute the various roles.
- Execute a Training Gap Analysis to understand the ability of current staff to fulfil those roles.
- Manage training design, development, and delivery

In order to deliver courses during the earliest stages of transition (assumed to be Q4 2018), the Training Needs Analysis will begin immediately after the business case is approved. In addition, the training team will be responsible for collecting feedback from the work environment to understand whether training is having the desired impact, and to make any subsequent changes. Training costs for this project have been incorporated into the project cost model.

6.6 Arrangements for benefits realisation

A detailed benefits analysis has been undertaken during the production of this business case in order to identify the expected benefits. This was described within the Economic Case and so is not repeated here.

In terms of ensuring the expected benefits are actually realised, a Benefits Management Strategy has been produced the objectives of which are to:

- Describe the benefits and responsibility for their delivery
- Establish baseline measurement where possible
- Quantify benefits where possible
- Periodically assess likely realisation and any actions required
- Record further expected benefits identified during the project
- Measure outcomes

TF has appointed a dedicated Benefits Manager with responsibility for ensuring benefits are identified and their realisation properly planned. A detailed benefits realisation plan is being developed which will clearly set out how the benefits will be baselined and the data to be collected over the life of the investment to confirm that each benefit has been realised.

The majority of the quantified benefits relate to the use of new capability to be developed as a result of this investment. Each new service or Force will be managed as a project in its own right, with clear plans setting out how Forces will be engaged to re-confirm the nature of the benefits and agree detailed plans for benefits realisation.

6.7 Commercial and legal

TF has, with Dorset Police[15] acting as the procuring Authority and using the Consultancy One & Digital Outcomes and Services (DOS2) frameworks, undertaken a robust procurement process to create a flexible resource pool of specialist expertise to help deliver the programme. Procurements required to deliver Fingerprint Capability project, will be undertaken with the same rigour, by police forces acting on behalf of

[15] The CC for Dorset is the NPCC Lead for Forensics and the project sponsor

the project and with oversight from the TF Commercial Board and ultimately the NPCC Procurement Lead for Forensics.

The project team is also being supplemented through secondments from other police forces managed through Dorset Police. Dorset Police Procurement and HR functions have been leading these processes.

Legal expertise required from time to time will be commissioned on a flexible basis.

6.8 Outline arrangements for risk management

Building on current risk management arrangements, and in accordance with good practice, the Project will continue to operate a comprehensive risk register containing clearly articulated risks and issues, with individual owners, actively managed mitigating actions and due dates. The current RAID log of Risk, Assumptions, Issues and Dependencies will continue to be maintained and managed particularly to mitigate any risks arising and resolve any issues identified by the Project team and board. Risks and issues will be regularly reviewed to confirm that the Project remains viable and will be managed within the governance structure, for example risks and issues being updated or escalated where necessary at the appropriate board meeting.

Full details of the Risk, Opportunity and Issues Management process can be found in the Programme Risk Management Plan (TFNP-KBR-PRG-PM-PLN-0035)

6.9 Outline arrangements for post project evaluation

6.9.1 Post implementation review (PIR)

This review ascertains whether the anticipated benefits have been delivered. The review is timed to take place approximately three months after completion of each implementation wave or after the completion of the technical implementation. At this point there will be a clear understanding of the realisation of benefits from the project to date, although this is too early to give a complete picture. The output from this review should provide lessons learned to contemporary and future implementation activity to maximise benefits.

6.9.2 Project evaluation reviews (PERs)

This review appraises how well the project was managed and whether or not it delivered to expectations. This review will be planned for shortly before the close of each implementation wave, with a separate PER for the technical implementation project, to ensure as many of the relevant staff as possible are available to contribute to the review and provide learnings and recommendations for best practice. A final PER will be programmed for the end of the Fingerprint Capability project as a whole.

6.10 Gateway review arrangements

The Fingerprint Capability Project forms part of the wider Transforming Forensics Programme, Gateway reviews will be organised at the programme level. This project will be subject to the governance and approval processes of the programme as set out in 6.2.

Appendix 1 Longlist options

Scoping options

Ref	Longlist option	Pros	Cons	In / Out
Sc01	UK-wide	More complete coverage, increased standardisation, more collaboration, increased resilience	Complex political and governance landscape, different rates of progression / starting positions, different funding sources / models	Out
Sc02	Whole of England and Wales	More complete coverage, increased standardisation, more collaboration, increased resilience	Governance and political difficulties	Out
Sc03	England and Wales less the Met	Proven interest across the geography, politically achievable within the programme timeframe, able to progress and have the Met join at a later date if it decides to	The Met is the largest single forensics market and provider, so missing out on some benefits	In

Service Solution

Ref	Longlist option	Pros	Cons	In / Out
SS01	Organise around standard E&W regions	Known regional bodies, other policing bodies operate in line with these, potentially lower political risk, regions may be seen to remain more "local", more hubs could reduce implementation complexity and cost, helps avoid unwanted attrition	May not deliver the necessary scale or critical mass in some areas, could exacerbate any existing political tensions within the regions	Out
SS02	Create new "Forensic regions" c. 10	Able to shape natural groupings and achieve balanced hubs in terms of "local" demand, more hubs could reduce implementation complexity and cost, regions may be seen to remain more "local", helps avoid unwanted attrition	May be difficult to deliver the necessary scale or critical mass in some areas if hubs move towards EMSOU levels of efficiency	In

Ref	Longlist option	Pros	Cons	In / Out
SS03	New “regions” c. 6 plus the Met (if it joins)	Should be easier to gain critical mass, sufficiently different from current regions to overcome local interest conflicts	Some hubs will cover very large geographic areas, likely to increase cost and complexity of implementations, result in unwanted attrition and redundancy costs	In

Implementation

Ref	Longlist option	Pros	Cons	In / Out
Im01	“Big bang”	Supports readiness for HOB, support readiness to deliver standards and accreditation into fewer hubs in line with the Forensic Regulator timetable, could deliver benefits sooner	High risk approach, likely to increase costs of implementation as it will require more change management and technical support within a shorter period of time	Out
Im02	Phased in waves	Allows the programme to work at a pace which fits forces needs and capability maturity more closely, provides learning opportunities to inform an de-risk the next wave	Could be very tight to meet the interception with HOB deliverables, potential political / demand risk in ordering the phasing of waves	In
Im03	Stage process to reach fewer hubs (i.e. move to e.g. 12 hubs and plan to move to e.g. 6 hubs)	Potentially less disruption and allows for a proving of benefits before further consolidation, lower cost initial wave if it is simpler and quicker (although there are more change locations	Involves a lengthy unsettled period for all involved if further change is expected, could cause unwanted attrition, doubles the change work required and increases costs, delays the realisation of greater benefits	Out

Long-listing assumptions

Ref	Title / subject area	Description	Agreed / noted by	Date
A001	Geographic scope	Geographic scope to include England and Wales, less the Metropolitan Police	Options workshop	14-11-2017
A002	Hubs	Anticipated hubs are currently: West Mids., EMSOU, SW, Eastern, NE and NW (six in total). It the Met joined that would be a seventh hub	PRB	Confirmed at the options workshop 14-11-2017
A003	Digital transmission	Digital transmission from near-scene is good enough for now, does not have to be at the scene (overcomes local access issues). This may change when ESCP comes online if it offers full coverage	PRB	Confirmed at the options workshop 14-11-2017
A004	Digital capture first	There is an assumption of "Digital capture first" whilst recognising there will, for the foreseeable future, be a need for physical lift of prints due to location, position, material etc.	Options workshop	14-11-2017
A005	Fit with DII	It is assumed that the HOB solution will fit / work in conjunction with the DII solution and other solutions currently in progress	Options workshop	14-11-2017
A005	HOB capability	HOB will only ever deal with Fingerprints, DNA and Facial Recognition (Martin Bill)	Options workshop	14-11-2017
A006	Parallel running	Assuming a soft landing of new HOB capability with IDENT1 continuing to run (Martin Bill)	Options workshop	14-11-2017
A007	Networking capability	Aim to get the IT solution (networking) in place by end September 2018, which would make virtual hubs a possibility – this could decouple the need to have all physical hubs ready in time to accept new HOB functionality	Options workshop	14-11-2017
A008	Resourcing the implementation	Assumed that resourcing will be a mix of TF Programme resource and Forces resource	Options workshop	14-11-2017
A009	Where costs fall	Cost of change is not a HOB cost – this will have to be borne by the Programme and Forces		Confirmed at the options workshop 14-11-2017

Ref	Title / subject area	Description	Agreed / noted by	Date
		Front-end peripherals e.g. cameras etc. have always been Forces costs and this is expected to continue In-bureaux peripherals (scanners, printers, screens etc.) had previously come under IDENT1 contract, although paid for by Forces, but assumption that HOB will de-scope these for Forces to source locally		
A010	Post 2020 funding	Assumed that the preferred commercial model is for a flat fee (membership fee), plus a charge per unit to reflect variable costs and encourage discerning use of the service, but without actively discouraging use of the service		Confirmed at the options workshop 14-11-2017
A011	Who owns the "Integrator"	Await input from Q5 study		Confirmed at the options workshop 14-11-2017
A012	HOB deliverables order	Assume Matcher comes first, then Workflow, then other systems in the Bureaus, e.g. FISH		Confirmed at the options workshop 14-11-2017
A013	HOB workflow	HOB have designed a single, standard workflow which they want rolled out across all users; there will be an opportunity for justifiable local variations down the line, but these will need to be paid for by Forces as a change request		Confirmed at the options workshop 14-11-2017
A014	What is the Programme procuring?	It is assumed that the programme will procure networking capability and management, cloud storage with access to PNN and some assurance, but otherwise HOB will procure goods and services required at the back-end		Confirmed at the options workshop 14-11-2017
A015	Procurement routes	It is assumed that procurement routes are available which will not impact on programme timelines		Confirmed at the options workshop 14-11-2017
A016	Commercial opportunities	Existing services to third parties on a commercial basis e.g. Isle of Man, HMRC, Trading Standards will continue and appropriate management mechanisms put in place		Confirmed at the options workshop 14-11-2017

Ref	Title / subject area	Description	Agreed / noted by	Date
A017	Technical solution	It is assumed that a PNN compatible cloud solution will be used and networking will use existing PNN capability		Confirmed at the options workshop 14-11-2017

Appendix 2 Options pros and cons workshop outputs

Summary of pros and cons workshop exercise held at Ryton 8 December 2017, attendees: Richard Small, Andrew Price, Andrew Rowley, Heather Small, Paul Marshall and Ian Bennett

Baseline + HOB Readiness + Accreditation		More Hubs		Fewer Hubs		Aggregation only		Aggregation +Integration, with regional governance		Aggregation +Integration, + national governance	
Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons
Gain an accuracy hit rate uplift through HOB	No incentive to improve, no burning platform	Financial savings	Staff retention difficulties / unwanted attrition of scarce skills	Potentially greater financial savings	Potentially greater staff retention difficulties / unwanted attrition of scarce skills	Financial savings	Potential staff retention difficulties / unwanted attrition of scarce skills	Greater financial savings through demand management / load balancing over the network	Potential staff retention difficulties / unwanted attrition of scarce skills (although potential to mitigate through the use of the network)	Greater financial savings through nationally organised demand management / load balancing over the "national grid"	Potentially greater staff retention difficulties / unwanted attrition of scarce skills
More hits off UMDB	Can't react to burst demand	Some are already formed	Redundancy costs		Potentially greater redundancy costs		Redundancy costs		Redundancy costs		Potentially greater redundancy costs
Sufficient resources, generally to cope with increased demand	Continued backlog	Improved standardisation	Trying to manage a variation of Force IT	Potentially greater improved standardisation	Potentially greater issues in managing variation of Force IT	Improved standardisation within regions	Issues in managing variation of Force IT	Improved standardisation across regions not just within them	Issues in managing variation of Force IT	Standardisation agreed nationally and implemented locally	Potentially greater issues in managing variation of Force IT
No TF programme implementation costs	No opportunity to restructure the workforce	Presents innovation opportunities	May lose some of the cohort	Potentially greater innovation opportunities	Potentially greater risk of losing some of the cohort	Presents innovation opportunities	Risk of losing some of the cohort	Presents innovation opportunities across regions not just within them	Risk of losing some of the cohort	Innovation opportunities can be managed and exploited nationally	Potentially greater risk of losing some of the cohort
Access to the improved HIB infrastructure	Multiple and costly accreditation points (some won't	Reduced accreditation burden	Local and regional politics could impact Hub formation	Potentially a larger reduction in accreditation burden	Potentially greater risk that local and regional politics could	Reduced accreditation burden	Risk that local and regional politics could impact aggregation	Reduced accreditation burden	Risk that local and regional politics could impact aggregation	Accreditation can be facilitated at the national level, significantly	Potentially greater risk that local and regional politics could

Baseline + HOB Readiness + Accreditation		More Hubs		Fewer Hubs		Aggregation only		Aggregation +Integration, with regional governance		Aggregation +Integration, + national governance	
Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons
	be able to achieve it)				impact Hub formation					reducing the burden	impact Hub formation
Retain current FTE (although variable expertise)	Risk of age profile of staff in FP is not mitigated	Improved capacity and resilience (depending on staff retention)	Local jobs are important to PCCs	Potentially greater capacity and resilience (depending on staff retention)	Local jobs are important to PCCs	Improved capacity and resilience (depending on staff retention)	Local jobs are important to PCCs	Further improvement in capacity and resilience through workload sharing	Local jobs are important to PCCs	Significantly improved capacity and resilience through workload sharing / uniqueues etc.	Local jobs are important to PCCs
Variation in SLAs	No standardised ways of working	Potentially better SLAs	Takes time to build confidence in the concept	Potentially better SLAs	Takes time to build confidence in the concept	Potentially better SLAs	Takes time to build confidence in the concept	Potentially better SLAs	Takes time to build confidence in the concept	Potentially better SLAs	Takes time to build confidence in the concept
Saving on removal of IDENT 1 kit	Inefficient and costly structure	Mitigate IDENT 1 continuity issues	Different Force/Regional t's and c's for pay conditions, travel etc.	Mitigate IDENT 1 continuity issues	Potentially greater differences in Force/Regional t's and c's for pay conditions, travel etc.	Mitigate IDENT 1 continuity issues	Variations in Force/Regional t's and c's for pay conditions, travel etc.	Mitigate IDENT 1 continuity issues	Variations in Force/Regional t's and c's for pay conditions, travel etc.	National body able to drive the agenda to shape HOB provision to bureaux	Potentially greater differences in Force/Regional t's and c's for pay conditions, travel etc.
	No TF Programme, money and skills to support the change	New recruitment models	Difficulty in servicing multiple customers	New recruitment models	Potentially greater difficulty in servicing multiple customers	New recruitment models	Difficulty in servicing multiple customers / different SLA's expectations etc.	New recruitment models	Difficulty in servicing multiple customers / different SLA's expectations etc. especially if an out of region customer via the network	National workforce planning to support recruitment, training and growth	Potentially greater difficulty in servicing multiple customers
	Can individual bureaux manage	Increased breadth of capabilities in the Hub	Challenge of defining customer	Potentially greater breadth of	Potentially greater challenge of defining	Increased breadth of capabilities in the Hub	Challenge of defining customer	Increased breadth of capabilities in the Hub	Challenge of defining customer	More efficient provision of capabilities , with access	Potentially greater challenge of defining

Baseline + HOB Readiness + Accreditation		More Hubs		Fewer Hubs		Aggregation only		Aggregation +Integration, with regional governance		Aggregation +Integration, + national governance	
Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons
	complex deployment of HOB functionality		cost and service levels	capabilities in the Hub	customer cost and service levels		cost and service levels		cost and service levels	over the network form all hubs to any hub	customer cost and service levels
	Hard to invest in new technology locally	Efficient transition to new HOB services	Can current brownfield sites support larger Hubs, e.g. a suitable building	Potentially a more efficient transition to new HOB services	Potentially greater risk around brownfield sites' ability to support larger Hubs, e.g. a suitable building	Efficient transition to new HOB services	Risk around brownfield sites' ability to support larger Hubs, e.g. a suitable building	Efficient transition to new HOB services	Risk around brownfield sites' ability to support larger Hubs, e.g. a suitable building, although potential to mitigate with fewer staff using network to fill gaps	Efficient transition to new HOB services	Potentially greater risk around brownfield sites' ability to support larger Hubs, e.g. a suitable building
	Variation in quality – e.g. service to the victims	Able to support apprenticeship or other training	Could take time to build workforce to necessary levels	Able to support apprenticeship or other training	Potentially greater increased need to rebuild workforce to necessary levels		Increased need to rebuild workforce to necessary levels		Increased need to rebuild workforce to necessary levels although potential to mitigate with fewer staff using network to fill gaps		Potentially greater increased need to rebuild workforce to necessary levels
	Inconsistent approach to training, sub-optimal at a local level	Specialist capability capacity		Potentially greater specialist capability capacity	Too few hubs could take out a lot of capacity from the system and actually reduce resilience in	Specialist capability capacity	Could increase the number of decision makers compared to single	Specialist capability capacity	Could increase the number of decision makers compared to single bureaux	More efficient provision of specialist capability capacity e.g. one hub serves all	Could increase the number of decision makers compared to single bureaux or

Baseline + HOB Readiness + Accreditation		More Hubs		Fewer Hubs		Aggregation only		Aggregation +Integration, with regional governance		Aggregation +Integration, + national governance	
Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons
					the event that one of the hubs became inoperative		bureaux processes		processes, mitigation possible through agreed regional structures and procedures		regions, mitigation possible through agreed regional structures and procedures
	Reinforces an unsustainable business model (financially and operationally)	Streamlined governance		Potentially more streamlined governance		Opportunity for streamlined governance		Potentially streamlined governance at the regional level enabling quicker decision making within the region		Potentially significantly more streamlined governance, shorter decision-making nationally	If this represented a separate unified management organisation, feedback from the OBC indicates this is unacceptable, therefore unachievable
	Currently unable to meet operational demand – accreditation is impacting this further	Easier to get and maintain accreditation		Potentially even easier to get and maintain accreditation							
	Continued lack of financial reinvestment or roadmap (any underspend	Wider exposure of staff to serious crime to keep experience and skills current		Potentially greater exposure of staff to serious crime to keep experience		Wider exposure of staff to serious crime to keep experience and skills current		Wider exposure of staff to serious crime to keep experience and skills current		Wider exposure of staff to serious crime to keep experience and skills current and	

Baseline + HOB Readiness + Accreditation		More Hubs		Fewer Hubs		Aggregation only		Aggregation +Integration, with regional governance		Aggregation +Integration, + national governance	
Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons
	is absorbed / transferred and lost)			and skills current						easier for all hubs to access the necessary skilled staff through the network	
		Easier transition to paperless processes		Easier transition to paperless processes		Easier transition to paperless processes		Easier transition to paperless processes		Transition to paperless processes can be facilitated nationally to drive greater benefits	
		Rationalise case management access		Rationalise case management access		Rationalise case management access		Rationalise case management access		Rationalise case management access	
		Enable digital reform		Enable digital reform		Enable digital reform		Enable digital reform		Digital reform can be organised nationally to deliver greater benefit	
		Efficiencies of collective procurement		Potentially greater efficiencies of collective procurement		Efficiencies of collective procurement		Efficiencies of collective procurement		Procurement can be organised nationally to deliver greater economies of scale	
		SOP alignment – sharing best practice		Potentially greater SOP alignment – sharing best practice		SOP alignment – sharing best practice		SOP alignment – sharing best practice		SOP alignment – sharing best practice can be driven by the national governing body to a	

Baseline + HOB Readiness + Accreditation		More Hubs		Fewer Hubs		Aggregation only		Aggregation +Integration, with regional governance		Aggregation +Integration, + national governance	
Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons
										single standard which further supports the benefit to retaining accreditation efficiently	
		Fewer stakeholders to decide new processes		Fewer stakeholders to decide new processes		Fewer stakeholders to decide new processes		Fewer stakeholders to decide new processes		National structure and agreed decision making processes to decide new processes	
		Capability maturity improved		Capability maturity improved		Capability maturity improved		Capability maturity improved		Capability maturity improved	
		Cloud based solution bypasses local issues		Cloud based solution bypasses local issues		Cloud based solution bypasses local issues		Cloud based solution bypasses local issues		Cloud based solution bypasses local issues	
						Improved MI / BI in aggregations drives service change and improved performance		Improved MI / BI across regions though the network enables benchmarking , knowledge sharing and drives service change and improved performance		Improved MI / BI nationally enables benchmarking , knowledge sharing and drives service change and improved performance	
								Opportunity for increased forensic		Forensic intelligence sharing can be	

Baseline + HOB Readiness + Accreditation		More Hubs		Fewer Hubs		Aggregation only		Aggregation +Integration, with regional governance		Aggregation +Integration, + national governance	
Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons
								intelligence sharing across regions		facilitated nationally to improve outcomes	

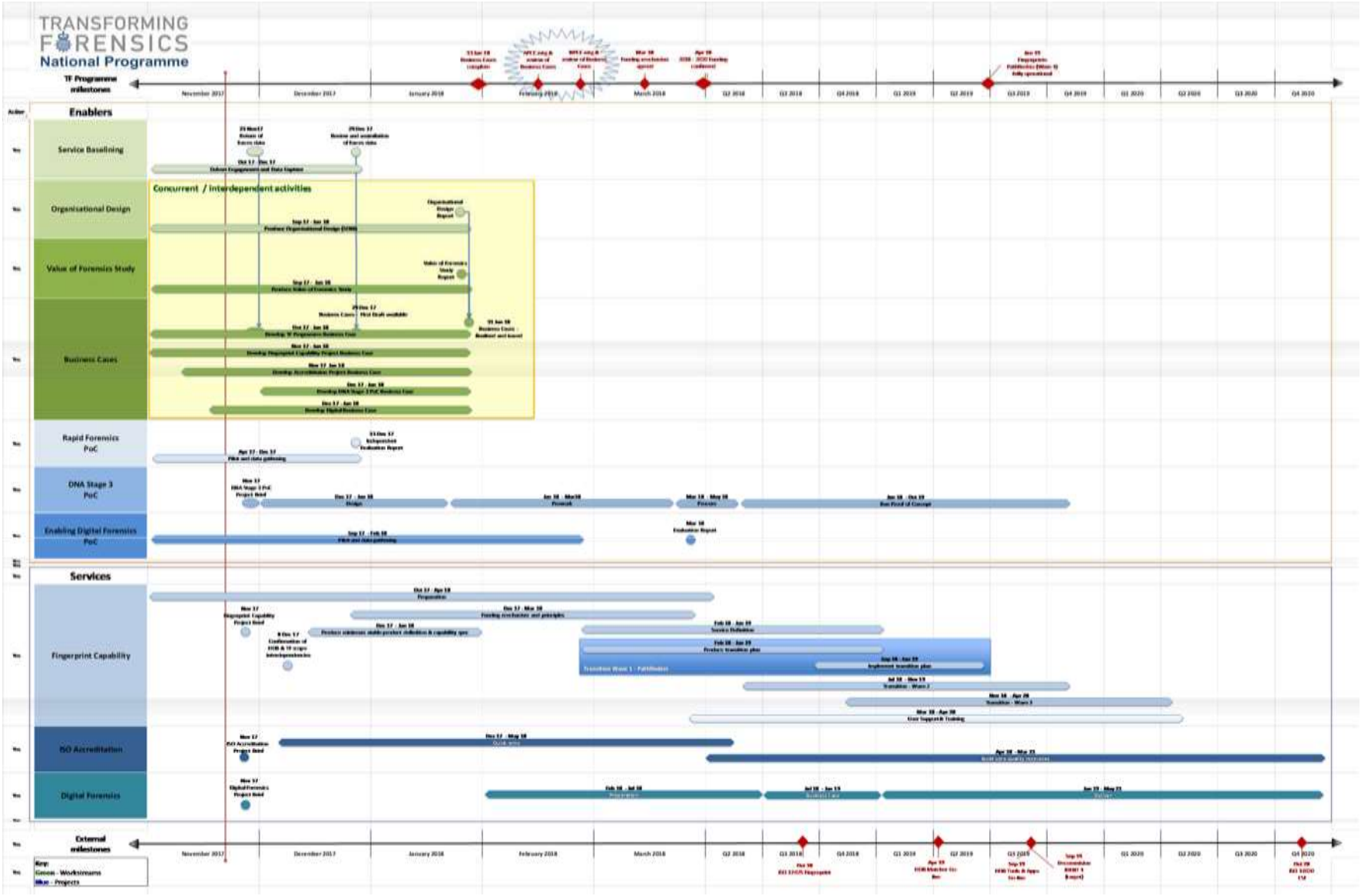
Appendix 3 Non financial benefit assessment

Benefit	Benefit type	Option 1 - Baseline including HOB readiness and Accreditation	Option 2a - "9+1 MPS" aggregated Hub configuration without integration retaining independent regional governance	Option 2b - 9+1 MPS" aggregated Hub configuration with integration, retaining independent regional governance	Option 2c - 9+1 MPS" aggregated Hub configuration with integration and single-body governance	Option 3a 7+1 MPS" aggregated Hub configuration without integration retaining independent regional governance	Option 3b - 7+1 MPS" aggregated Hub configuration with integration, retaining independent regional governance	Option 3c - 7+1 MPS" aggregated Hub configuration with integration and single-body governance	Option 4 - OBC Option 5 - fully unified national service, 3 super-hub configuration
Mitigate risk of IDENT1 business continuity in service	Qualitative	0	1	4	4	1	4	4	4.5
Improved resilience	Qualitative	0	2	3.5	5	2.5	4	5	3
Improved ability to maintain general competence and specialist capabilities compliant with accreditation	Qualitative	0	2	3	4	2	3	4	5
Facilitates transition to paperless processes	Qualitative	1	2.5	4	5	2.5	4	5	5
Facilitates digital reform	Qualitative	1	2.5	4	5	2.5	4	5	5
SOP alignment – sharing best practice	Qualitative	0	1	3	5	1	3	5	5
Improved MI / BI drives service change and consistent performance	Qualitative	0	2	3	5	2	3	5	5
Improved workforce / talent management	Qualitative	0	2	3	5	2	3	5	5
		2	15	27.5	38	15.5	28	38	37.5
		5%	39%	72%	100%	41%	74%	100%	99%
		8	**7**	**5**	**1**	**6**	**4**	**1**	**3**
Improved customer service	Quantitative non-financial	0	2.5	4	4.5	3	4.5	5	4
Improved victim satisfaction	Quantitative non-financial	0	2	3	4	2	3	4	4
Increased Revenue generation	Quantitative non-financial	0	1	2	3	1	2	3	3
Increased R&D spend	Quantitative non-financial	0	1	1	5	1	1	5	5
Simplification of cross border cases	Quantitative non-financial	0	2	4	5	2.5	4.5	5	5
		0	8.5	14	21.5	9.5	15	22	21
		0%	39%	64%	98%	43%	68%	100%	95%
		8	**7**	**5**	**2**	**6**	**4**	**1**	**3**

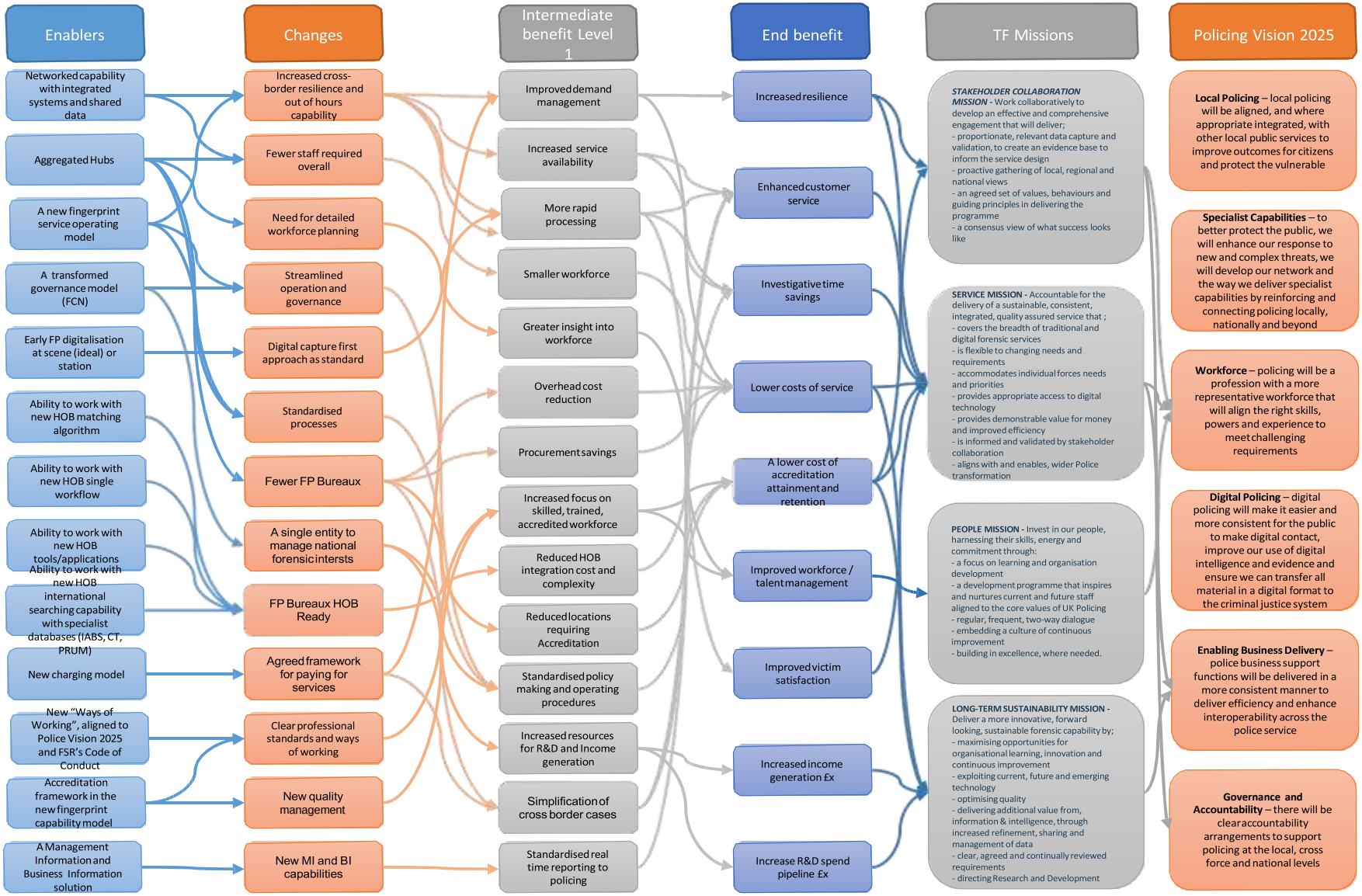
Appendix 4 Risk assessment

		Option 1 - Baseline including HOB readiness and Accreditation			Option 2a - "9+1 MPS" aggregated Hub configuration without integration retaining independent regional governance			Option 2b - 9+1 MPS" aggregated Hub configuration with integration, retaining independent regional governance			Option 2c - 9+1 MPS" aggregated Hub configuration with integration and single-body governance			Option 3a - 7+1 MPS" aggregated Hub configuration without integration retaining independent regional governance			Option 3b - 7+1 MPS" aggregated Hub configuration with integration, retaining independent regional governance			Option 3c - 7+1 MPS" aggregated Hub configuration with integration and single-body governance			Option 4 - OBC Option 5 - fully unified national service, 3 super-hub configuration		
Risk Area	**Risk description**	**Prob (1-5)**	**Imp (1-5)**	**Risk score**	**Prob (1-5)**	**Imp (1-5)**	**Risk score**	**Prob (1-5)**	**Imp (1-5)**	**Risk score**	**Prob (1-5)**	**Imp (1-5)**	**Risk score**	**Prob (1-5)**	**Imp (1-5)**	**Risk score**	**Prob (1-5)**	**Imp (1-5)**	**Risk score**	**Prob (1-5)**	**Imp (1-5)**	**Risk score**	**Prob (1-5)**	**Imp (1-5)**	**Risk score**
Design	There is a risk that the service design cannot deliver the services at the required performance or quality standards which would impact service credibility, CJS outcomes and potentially future participation by Forces	4	4	16	3	4	12	2	4	8	2	4	8	3	4	12	2	4	8	2	4	8	2	4	8
Availability risk	There is a risk that the quantum of the service provided is less than that required under a SLAs which would impact service credibility, CJS outcomes and potentially future participation by Forces	3	5	15	2	5	10	1	5	5	0.5	5	2.5	2	5	10	1	5	5	0.5	5	2.5	0.5	5	2.5
Construction risk	There is a risk that the construction / fitting out of physical assets such as large Hub locations or Data centres is not completed on time, to budget and to specification which would impact go live, delay benefits realisation (savings come later) or increase costs (e.g. extended leases)	0	0	0	3	4	12	3	3	9	3	3	9	3.5	4	14	3.5	3	10.5	3.5	3	10.5	4	3	12
Decant risk	There is a risk that decanting staff from existing SSUs to new Hub locations is disruptive and protracted which could impact service levels, create back logs and adversely impact current investigations	0	0	0	2	4	8	2	3	6	2	3	6	3	4	12	3	3	9	3	3	9	3	4	12
Maintenance risk	There is a risk that the costs of maintaining assets estates, technical infrastructure etc. are materially different from the budget	3	4	12	3	3	9	2	3	6	2	3	6	3	3	9	2	3	6	2	3	6	2	3	6
Operational cost risk	There is a risk that operating costs vary from budget which would impact on service viability and future charging model	3	3	9	2	2	4	2	2	4	1	2	2	2	2	4	2	2	4	1	2	2	1	2	2
Operational performance risk	There is a risk that performance standards slip below that of the SLA, which would damage the service's reputation and impact on investigations	3	3	9	2	2	4	2	2	4	1	2	2	2	2	4	2	2	4	1	2	2	1	2	2
Supplier risk	There is a risk that suppliers are unable to deliver outputs as contracted which would impact on service availability.	1	4	4	1	4	4	2	4.5	9	1	5	5	1	4	4	2	5	10	1	5	5	1	5	5
Reputational Risk	There is a risk that there will be an undermining of customer/ media perception of the service's ability to fulfil its requirements e.g. adverse publicity concerning an operational problem which will impact credibility with Forces and the wider CJS	3	3	9	3	3	9	3	4	12	1	5	5	3	3	9	3	4	12	1	5	5	1	5	5
Technology risk	There is a risk that changes in technology result in services being provided using non-optimal technology which increases operational cost above that necessary or reduces the effectiveness of the service in supporting the CJS	5	4	20	3	3	9	2	3	6	2	2	4	3	3	9	2	3	6	2	2	4	2	2	4
Staffing risk	There is a risk that too many skilled staff leave rather than move to the new hub locations which would impact on the ability of the service to meet volume and quality SLAs. Lack of clear career path and age profile is a current issue.	1	4	4	3.5	4.5	15.75	3.5	4	14	3.5	3	10.5	4	4	16	4	3.5	14	4	3	12	5	4	20
				98			96.75			83			60			103			88.5			66			78.5
				95%			94%			81%			58%			100%			86%			64%			76%
				7			6			4			1			8			5			2			3

Appendix 5 Plan on a page



Appendix 6 Fingerprint Capability Project Benefits Map


Enablers
Changes
Intermediate benefit Level 1
End benefit
TF Missions
Policing Vision 2025
Networked capability with integrated systems and shared data
Aggregated Hubs
A new fingerprint service operating model
A transformed governance model (FCN)
Early FP digitalisation at scene (ideal) or station
Ability to work with new HOB matching algorithm
Ability to work with new HOB single workflow
Ability to work with new HOB tools/applications
Ability to work with new HOB international searching capability with specialist databases (IABS, CT, PRUM)
New charging model
New "Ways of Working", aligned to Police Vision 2025 and FSR's Code of Conduct
Accreditation framework in the new fingerprint capability model
A Management Information and Business Information solution
Increased cross-border resilience and out of hours capability
Fewer staff required overall
Need for detailed workforce planning
Streamlined operation and governance
Digital capture first approach as standard
Standardised processes
Fewer FP Bureaux
A single entity to manage national forensic intersts
FP Bureaux HOB Ready
Agreed framework for paying for services
Clear professional standards and ways of working
New quality management
New MI and BI capabilities
Improved demand management
Increased service availability
More rapid processing
Smaller workforce
Greater insight into workforce
Overhead cost reduction
Procurement savings
Increased focus on skilled, trained, accredited workforce
Reduced HOB integration cost and complexity
Reduced locations requiring Accreditation
Standardised policy making and operating procedures
Increased resources for R&D and Income generation
Simplification of cross border cases
Standardised real time reporting to policing
Increased resilience
Enhanced customer service
Investigative time savings
Lower costs of service
A lower cost of accreditation attainment and retention
Improved workforce / talent management
Improved victim satisfaction
Increased income generation £x
Increase R&D spend pipeline £x
STAKEHOLDER COLLABORATION MISSION - Work collaboratively to develop an effective and comprehensive engagement that will deliver;
- proportionate, relevant data capture and validation, to create an evidence base to inform the service design
- proactive gathering of local, regional and national views
- an agreed set of values, behaviours and guiding principles in delivering the programme
- a consensus view of what success looks like
SERVICE MISSION - Accountable for the delivery of a sustainable, consistent, integrated, quality assured service that ;
- covers the breadth of traditional and digital forensic services
- is flexible to changing needs and requirements
- accommodates individual forces needs and priorities
- provides appropriate access to digital technology
- provides demonstrable value for money and improved efficiency
- is informed and validated by stakeholder collaboration
- aligns with and enables, wider Police transformation
PEOPLE MISSION - Invest in our people, harnessing their skills, energy and commitment through:
- a focus on learning and organisation development
- a development programme that inspires and nurtures current and future staff aligned to the core values of UK Policing
- regular, frequent, two-way dialogue
- embedding a culture of continuous improvement
- building in excellence, where needed.
LONG-TERM SUSTAINABILITY MISSION - Deliver a more innovative, forward looking, sustainable forensic capability by;
- maximising opportunities for organisational learning, innovation and continuous improvement
- exploiting current, future and emerging technology
- optimising quality
- delivering additional value from, information & intelligence, through increased refinement, sharing and management of data
- clear, agreed and continually reviewed requirements
- directing Research and Development
Local Policing – local policing will be aligned, and where appropriate integrated, with other local public services to improve outcomes for citizens and protect the vulnerable
Specialist Capabilities – to better protect the public, we will enhance our response to new and complex threats, we will develop our network and the way we deliver specialist capabilities by reinforcing and connecting policing locally, nationally and beyond
Workforce – policing will be a profession with a more representative workforce that will align the right skills, powers and experience to meet challenging requirements
Digital Policing – digital policing will make it easier and more consistent for the public to make digital contact, improve our use of digital intelligence and evidence and ensure we can transfer all material in a digital format to the criminal justice system
Enabling Business Delivery – police business support functions will be delivered in a more consistent manner to deliver efficiency and enhance interoperability across the police service
Governance and Accountability – there will be clear accountability arrangements to support policing at the local, cross force and national levels