



**Forensic
Capability
Network**

Prospectus

Executive summary



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At the heart of the FCN is the desire to work together nationally to deliver high quality, specialist forensic science capabilities; to share knowledge; and to improve resilience, efficiency, quality and effectiveness.

Welcome to the Forensic Capability Network (FCN)

We are delighted to be able to invite your organisation to become a founding member of the Forensic Capability Network (FCN): a new way of working that will help harness our collective forensic science efforts; transform our forensic science landscape; make our respective forensic science capabilities so much more than the sum of their individual parts; and help us all deliver the first-class policing and law enforcement services our communities deserve.

What is the Forensic Capability Network?

In its broadest terms, the **FCN is a community of all its members' forensic science capabilities and expertise** - still owned and managed locally but benefiting from a level of collective investment, focus, networking and support that has never been possible before. At its heart is the desire to work together nationally

to deliver high quality, specialist forensic science capabilities; to share knowledge; and to improve resilience, efficiency, quality and effectiveness.

We will say more about each of these elements and the associated FCN products and services in due course.

Before we do though, we want to emphasise the 'club' nature of the FCN: a club owned by us, its members, and designed to shape and develop our forensic science capabilities in the way that makes most sense to us, as those responsible for delivering policing and law enforcement outcomes to our communities.

The FCN consists of three main elements:



People

A network made up of all our forensic science professionals, who will share skills and expertise to improve standards and be able to share workload to increase resilience.



Service

A core team helping to define, co-ordinate and orchestrate forensic service delivery, focus investment and engage with the marketplace to continually improve forensic capabilities across law enforcement.



Technology

A platform and toolset providing the technology to connect and enhance forces' existing forensic capabilities and enabling them to share work by using common processes and policies.

Why is the Forensic Capability Network so vital?

Put simply, our current forensic science landscape is not sustainable. Fantastic opportunities will go unrealised if we fail to harness our collective efforts, and the challenges we face are so great, they could easily overwhelm any one of us. Here are just five reasons why we believe the FCN is so vital.

1 We need a more sustainable and forward-looking commercial marketplace.

We all felt the pain when Key Forensic Services Limited, the country's third largest commercial provider of forensic science services, went into administration in January 2018 and we are still feeling the effects of the alleged data manipulation at Randox Testing Services. **These types of events damage public confidence, as well as consume huge amounts of our resources in crisis management.**

Reducing volumes of work and downward pressure on prices has served to destabilise the traditional forensics¹ market, where we currently rely almost exclusively on a very small number of commercial forensic service providers. Conversely, rapidly increasing demand for digital forensics has led some of us to contract with companies that do not have the appropriate quality accreditation, security standards or business continuity plans in place.

The only way to mitigate these risks is to create a more sustainable, quality-assured and forward-looking commercial marketplace, where we can forecast and communicate our demand effectively; phase our procurement activity; place greater emphasis upon quality, 'value-add' and sustainability; and give the market the confidence it needs to invest in the capabilities and capacity we really need.

2 Lack of accreditation is an increasing risk for us all.

By October 2020 more than a hundred different forensic science techniques will need to meet robust ISO 17025 and ISO 17020 accreditation requirements, including the broad range of forensic science activities undertaken out in the field and the ever-expanding array of digital forensic capabilities. It has taken huge amounts of effort over the last 12 months just to

get 60% of fingerprint bureau capacity accredited in time for the 25th March 2019 deadline for legal compliance. Achieving accreditation for a much broader range of capabilities is going to be far harder.

Furthermore, with the Government backing a current Private Member's Bill to give the Forensic Science Regulator (FSR) statutory

enforcement powers and the Director of Public Prosecutions recently ruling that any fingerprint identification evidence playing a significant part in a criminal case now needs to have been provided by an accredited fingerprint bureau, **the risk to us all, both operationally and reputationally, of failing to meet our accreditation requirements is immense.**

3 A more cohesive forensic science landscape will enable much stronger performance.

The fragmented nature of our current landscape, consisting of numerous different forensic science units all trying to solve similar problems in slightly different ways, **just doesn't make sense, either operationally or financially.** Take accreditation, for example, where we currently have most police forces and law enforcement agencies operating slightly different forensic science processes, all of which need to be validated, documented and accredited / reassessed individually.

This is costing us millions of pounds and thousands of hours of time every year that would be better reinvested elsewhere.

The operational impact is just as evident. Different processes and a lack of networking capability make it **almost impossible** for most of us **to share forensic science workload efficiently or effectively, or capitalise on the intelligence or investigative opportunities that could be leveraged as a result.** With so much crime now either

ignoring or exploiting geographical boundaries, this fragmentation is hampering both our resilience and our performance.

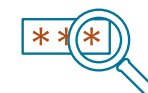
Furthermore, with the Government investing significant sums in new national capabilities, including the Home Office Biometrics (HOB) Programme, **we are unlikely to maximise the potential benefits of these investments to forensic science if we continue to operate in an ad hoc or disjointed manner.**

4 We need to keep pace with technological change and the resulting increase in demand.

The demand for forensic science capabilities is rising sharply as the digital footprint associated with crime expands. **Current estimates suggest that, by 2022/23 and without a significant change in our approach, we will need to be spending between £200 million**

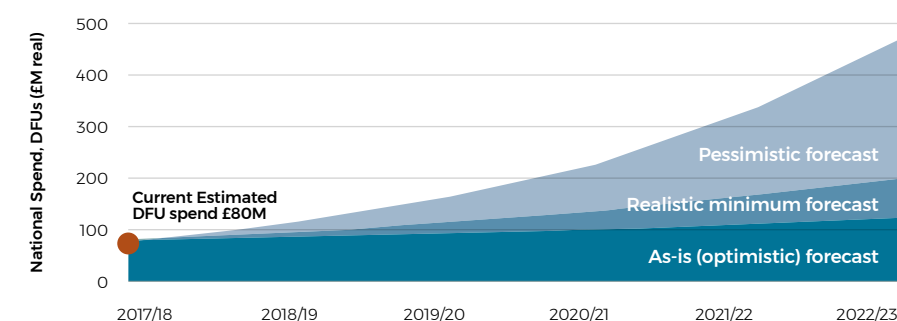
and £500 million per annum on digital forensics, just to maintain current performance. This compares to just £80 million spent on digital forensics in 2017/18.

And yet, just as technological advancement creates challenges, it also offers potential solutions.



What we need to do is increase our forensic science research and innovation activity, target it more effectively, and find new ways to exploit technology for our law enforcement purposes. Otherwise, criminals will increasingly be able to stay one step ahead of our efforts to bring them to justice.

Forecast Digital Forensic Unit (DFU) spend to maintain DFU Effectiveness



¹ Including DNA, blood pattern analysis, controlled substances, toxicology, trace evidence (glass, hair, paint and gunshot residue etc.), entomology and fire investigation.

5 We must attract, develop, and retain a forensic science workforce that can meet the needs of both today and tomorrow.

We face a number of related challenges in this area, particularly around staff retention and succession planning; career development; multi-skilling across forensic science capabilities (particularly traditional and digital forensics on the frontline); and preparation for future technologies and processes.

By working together, we can provide the knowledge, support, professional development, career pathways and modern forensic tools that we need to be able to retain, develop, and nurture a fully equipped, empowered, and sustainable workforce.

Moreover, our assessments have the full backing of both last July's joint Home Office, National Police Chiefs' Council (NPCC) and Association of Police and Crime Commissioners (APCC) review of forensic science² and the House of Lords Science and Technology Committee³ 'blueprint for change' published just last month. The former cited a view amongst criminal justice system (CJS) stakeholders that **"the dispute of forensic evidence in court could become commonplace without change"**. The latter deemed that

"forensic science in England and Wales is in a state of crisis and must be reformed urgently" and highlighted that **"an absence of high-level leadership, a lack of funding and an insufficient level of research and development now means the UK is lagging behind others."**

We believe that the FCN is the best way for us to meet these challenges, both collectively and individually. We never cease to be impressed by the array of talent, expertise and dedication

to be found within our forensic science community. But, to be effective, they need our support in helping to harness collective effort, strip away unnecessary duplication and inefficiency, and create the type of network (human and technical) that enables us, as individual police forces and law enforcement agencies, to maximise our investment, enhance our capabilities and share forensic science workload and intelligence whenever we want or need to do so.



Forensic science in England and Wales is in a state of crisis and must be reformed urgently

² Forensics Review - Review of the provision of forensic science to the criminal justice system in England and Wales (July 2018)

³ House of Lords Science and Technology Committee - Forensic science and the criminal justice system: a blueprint for change (1 May 2019)

What will the FCN do for its members?

We highlighted above the three main elements of the FCN: people, service and technology. Subsequent sections of this document provide an overview of the products and services that the FCN will offer. But first we want to capture the essence of the FCN we are inviting you to join.

People

Across England and Wales, we currently employ more than 4,000 people in our various in-house forensic science capabilities: crime scene investigation, fingerprint enhancement laboratories and identification bureaux, imaging units and digital forensic units etc. These people perform critical roles but all too often they work in relative isolation, trying to tackle almost identical problems and often without easy access to learning from elsewhere. The FCN is designed to change this by providing the additional capacity needed to work with members and appropriate partners from across academia and industry to:

- ✓ create and maintain professional knowledge bases and quality management systems, able to be accessed by practitioners right across the FCN;
- ✓ create and maintain appropriate development programmes and career pathways for forensic science practitioners as part of a broader national workforce development and retention strategy;
- ✓ attract and shape the forensic scientists of the future;
- ✓ reduce members' accreditation burden by producing and validating a comprehensive suite of standard operating procedures and achieving a 'validate once, verify many' approach across the network;
- ✓ support members to identify and introduce new capabilities right through from initial research and development to validation and deployment;
- ✓ support scientific support units and their forensic science practitioners in achieving the skills balance required between traditional and digital forensics;
- ✓ give practitioners a stronger voice and a greater sense of ownership of this critical area of our work, so that, in line with Policing Vision 2025, we can inspire them to create the capabilities, systems and processes that will enable them to provide the first-class services that the public deserves.

Service

The FCN's service element is the central team that will be employed to manage and orchestrate all of the FCN's functions, deliver its products and services, and support the FCN membership. You can find the detail behind each of these pillars and their constituent products and services in the longer version of this FCN prospectus. In essence, though:



- Strategy, policy, advocacy
- Capabilities, R&D and innovation
- Workforce strategy and development
- Knowledge, advice and guidance

Science's mission, on behalf of the FCN community, is to identify and exploit opportunities so that members can meet future challenges by having the people, knowledge, skills and specialist tools and capabilities they will need to do the right job in the right place at the right time.

It will do this by: working closely with wider criminal justice partners; horizon scanning; helping set strategic direction; providing a clear voice for the FCN community; creating capability roadmaps; bidding for funding and prioritising research and development activity; co-ordinating activity with other national programmes e.g. Digital Policing; working with industry to help create and deploy new capabilities; maintaining a catalogue of approved forensic science capabilities; creating and maintaining knowledge bases and working with academia to help develop the workforce of both today and tomorrow.



- Standards
- Validation
- Accreditation
- Knowledge, advice and guidance

Quality's mission, on behalf of the FCN community, is to achieve and maintain quality service with efficient, standardised processes, and to act as a single voice with key standards and accreditation stakeholders.

It will do this by: helping members to validate new techniques and capabilities; creating appropriate standard operating procedures; creating and maintaining quality management systems and ground truth databases; supporting members with their accreditation requirements; and working to achieve a 'validate once; verify many' approach wherever possible across the network.



- Strategic market management
- Supplier performance and market stability
- Knowledge, advice and guidance
- Contracting and commercial

Commercial's mission, on behalf of the FCN community, is to define, develop and maintain a sustainable and forward-looking commercial marketplace for both traditional and digital forensic science.

It will do this by: leading on forensic science market strategy and demand management; engaging with industry; advising on make / buy decisions; creating model contracts; monitoring contract and supplier performance; leading on national contracts / frameworks; contingency planning; and providing support to Gold and Silver groups in the event of any market failure.



- FCN ICT platform and Technical Design Authority
- Specialist capabilities and tools
- Brokerage and service management
- Business change

Operations' mission, on behalf of the FCN community, is to maximise resilience and effectiveness through the design, introduction and maintenance of new ICT platforms, tools, operating models and business change support.

It will do this by: providing and maintaining the FCN ICT platform and toolsets (see Technology below) and orchestrating the services enabled by it, including routing of workload across the network, digital storage and access, and associated performance management, data and analytics. It will also act as an intelligent customer, when interacting with technical programmes such as HOB, and provide business change support to FCN members when implementing new FCN capabilities.

Technology

The FCN's technology element consists of the technical capabilities being developed by the Transforming Forensics Programme in consultation with the forensic science community.

These are designed to connect and enhance members' forensic science capabilities and are being developed to ensure scalability and the opportunity for incremental growth, as resources allow. They include the FCN's underlying ICT platform and toolsets, which will:

- provide web-based resources, including knowledge bases, to help practitioners access up-to-date learning, standards and requirements etc;

- provide, through joint working with other national initiatives, secure cloud-based storage and processing of forensic evidence;
- provide integration with local criminal case and evidence management systems;
- enable FCN members to prioritise and share workload across the network;
- provide service management information to control workflows, highlight bottlenecks and manage performance.

They also include specialist tools and capabilities. Some of the first examples of these are specialist fingerprint capabilities, such as:

- enabling CSIs to capture fingerprints digitally at the scene and transmit them electronically through the FCN platform to the most appropriate or chosen fingerprint identification bureau;
- enabling CSIs to capture, annotate and share photos of crime scenes and fingerprints in real time;
- providing new digital examination tools and enabling the production of automated practitioner notes.



This early emphasis upon fingerprint capabilities is designed to maximise the benefits to us of the Home Office Biometrics (HOB) Programme. Over time, and depending upon the level of continued investment through the Transforming Forensics Programme or other funding sources, we aim to extend the underlying platform and develop toolsets for use by many more forensic science capabilities. You can read much more about our plans in the *Operations* and *Future direction and development* chapters of the longer version of this FCN prospectus.

When will the FCN's products and services be available?

The official go-live date for the FCN is **1st April 2020**. This is when all the FCN core team staff and the core ICT platform are scheduled to be in place. Supported by the Police Transformation Fund grant as part of the Transforming Forensics Programme, however, we have already started building FCN capacity and capability, and some of the FCN's products and services are already bearing fruit. Examples include:



the emerging FCN Science team, which is providing support to the NPCC Science and Innovation Board and is working closely with the Transforming Forensics DNA and Digital Forensics projects to create future capability roadmaps and trial new processes and technologies;



the FCN Commercial team, which has recently helped achieve national agreement on contract uplifts as a means of stabilising the traditional forensic science marketplace; continues to provide invaluable support to various Gold and Silver groups e.g. Radox retesting; and is currently supporting the development of a long-term market strategy for both traditional and digital forensic science;



the FCN Quality team, which is supporting the NPCC Performance and Standards Group and, through the creation of trouble-shooting teams, has been helping forces achieve their accreditation for fingerprint processes; is focusing upon the crime scene investigation accreditation challenge (ISO 17020 by October 2020); and is also working with the FSR and UKAS in developing an assessment approach;



the FCN Operations team, which is working with the fingerprint community to develop a new operating model for fingerprint identification, which not only maximises the potential benefits being enabled by the Home Office Biometrics (HOB) Programme but is also able to influence HOB's future direction. For example, Operations has recently procured changes to HOB by way of a tenprint export tool.

April 2020 is only the start - a picture of the future

The FCN will, of course, evolve as it responds to new challenges and opportunities and is shaped by its members. Similarly, it will support more and more capabilities as they are delivered either by the Transforming Forensics Programme or by members of the FCN community themselves.

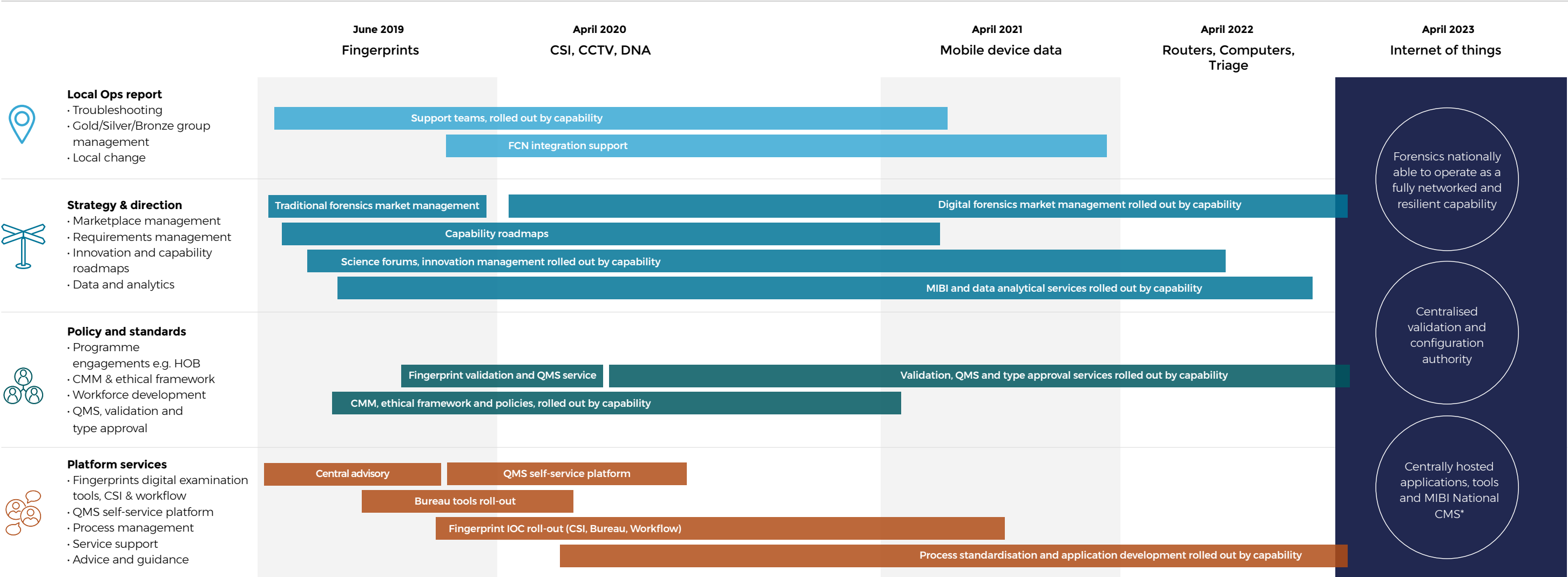
The diagram below illustrates how we envisage the core FCN team supporting the broader community over the next few

- years, with each of the FCN's four pillars working together to:
- provide appropriate local operational support to FCN members in the form of troubleshooting teams, business change advice and FCN integration e.g. onboarding to the FCN platform and adoption of new capabilities;
 - provide appropriate strategy and direction across the whole spectrum of forensic science

- capabilities, ranging from market management to innovation and capability development;
- improve policies and standards through the provision of appropriate quality management systems, validation services, and ethical framework and policy development;
 - deliver enhanced forensic science processes and technical capabilities.

The breadth of forensic science and the scale of the challenges facing the FCN community, however, necessitate an incremental approach. The FCN core team will therefore focus upon forensic science capabilities in logical groups, starting, as it has, with some of the more traditional areas of forensic science but then rapidly extending its scope into the ever-expanding areas of digital forensic science.

As increasing numbers of forensic science capabilities are improved, standardised and integrated into the FCN network, the FCN will begin to realise its full potential. This is illustrated by the circles on the right of the diagram as the FCN community is able to achieve true resilience and economies of scale.



What will the FCN cost and what will members get in return?

It will cost approximately £5.5 million a year, starting from April 2020, to deliver the FCN products and services set out in this prospectus. You can read more about how this budget is made up, along with the benefits we expect members to receive in return, in the *Costs and benefits* chapter within the longer version of this FCN prospectus.

The Chief Constables’ Council and the APCC have already indicated a preference for this to be funded by the Home Office making a direct allocation to the FCN from the overall police funding settlement. The Home Office is therefore intending to include this £5.5 million within its spending review submission to the Treasury later this year. If this direct funding approach is not agreed, we will ask members to pay a membership

contribution, proportionate to their Home Office grant allocations (or equivalent), as they do for similar collaborative arrangements like the NPCC or NPoCC.

For a mid-size police force, this would work out at just under £123,000. Against that, though, we would expect it to receive a **financial return on investment** of approximately £465,000⁴ each year **i.e. almost £4 for every £1 invested. This would be in addition to the significant non-financial membership benefits of reduced operational and reputational risk.**

Furthermore, this return on investment excludes the significant savings we expect members to be able to make by being able to import and export forensic workload to even out peaks and troughs, and by adopting

standardised FCN operating procedures. Our (Transforming Forensics Programme) business case for fingerprints found that, if all fingerprint bureaux were able to operate at just the average cost of the most efficient currently, policing could save £5 million per annum (26% of the current cost base). **If our model mid-size police force were also able to generate that level of savings, it would equate to a further £112,000 each year – almost the value of its entire annual membership contribution.**

But this again only **reflects the FCN’s initial potential.** Putting it another way, if introducing the FCN has the potential to save £5 million a year for fingerprints, **just imagine the potential across all forensic science capabilities, especially in the ever-expanding field of digital forensic science.**

How will membership work and how will I have my say?

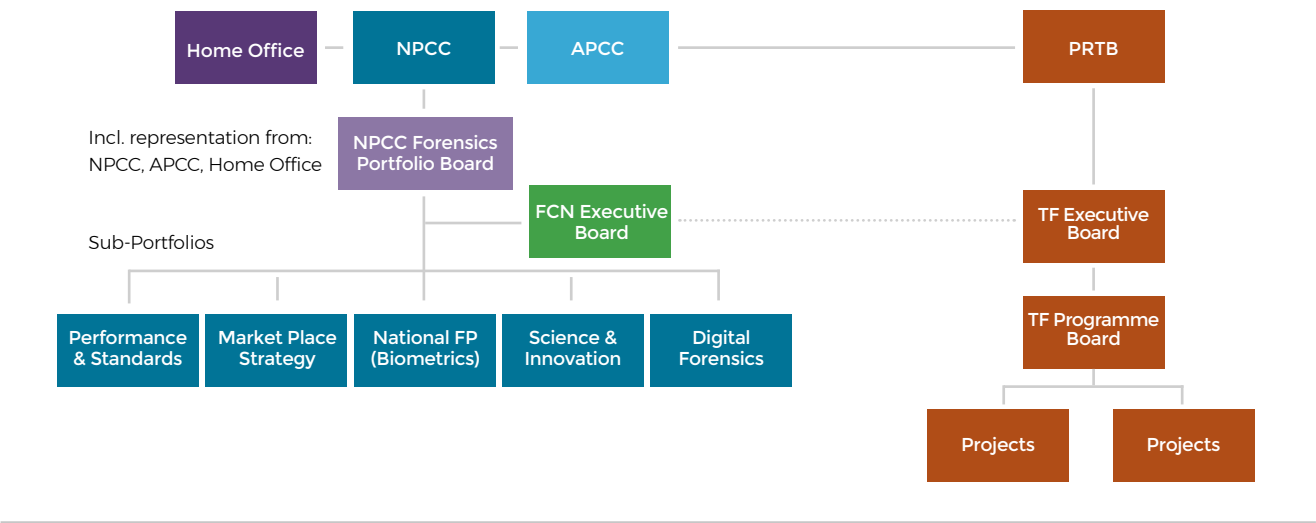
The FCN is going to be a club: along much the same lines as the NPCC, with a host policing service (Dorset Police and Dorset Office of the Police and Crime Commissioner in the first instance) acting as the club’s legal entities and providing the requisite corporate support services. To become a member, your organisation will just need to sign a Section 22A agreement, which we plan to issue in September 2019, following a round of consultation on a draft document to be issued in July. Membership will give you access to all the products and services set out in this prospectus,

as they develop, as well as an ongoing say in the FCN’s evolution.

As with all clubs, membership will convey a range of rights and responsibilities. We have provided a flavour of these in the chapter on *Club membership*, to be found within the longer version of this FCN prospectus, but we will set out all these details in the draft Section 22A agreement we expect to be ready for consultation in July.

We are looking to keep the club’s governance as streamlined as possible and ensure that it complements, rather than conflicts with or duplicates, the broader

policing governance landscape. You can read more about this in the *For policing by policing* chapter of the longer version of this prospectus. Essentially, though, the FCN will have its own Executive Board, which will be responsible for shaping and implementing the FCN’s strategic delivery plan. This strategic delivery plan will be designed to support the work of the NPCC Forensics Portfolio Board and its sub-portfolios, on the one hand, and the work of the Police Reform and Transformation Board (PRTB), operating through the Transforming Forensics Programme, on the other, as illustrated below.



Never a better time

We are very excited about the FCN, as indeed are the Home Office, NPCC and APCC, judging by the Joint Review of Forensic Provision implementation plan they published in April, **in which the FCN (and the Transforming Forensics Programme) are the focus of no fewer than eight of the 13 actions designed to improve forensic science** within the criminal justice system and to help maintain public confidence in it.

Furthermore, **we have the full backing of the Policing Minister, Nick Hurd MP**, who has recognised the role that the Transforming Forensics Programme has played both in assisting forces to achieve accreditation and stabilising the commercial marketplace, and has given his commitment to continue to support both the Transforming Forensics Programme and the FCN.

But to make the FCN a reality, we need your continued support. We very much hope that your organisation will become a founding member of our new FCN club and help us make the future for all our forensic science capabilities a much brighter one.



Next steps

We are keen to receive your feedback on this prospectus and encourage you to share your views with us through your usual NPCC regional contacts. This will help us to refine our plans and ensure that we create a FCN that works for all its members.

Similarly, we are keen to assess the current level of support for the FCN and have included a simple Expression of Interest form with the covering letters issued with this prospectus. A positive expression of interest will not bind your organisation in any way but will help us as we continue our planning and discussions with the NPCC, APCC and the Home Office.

If you have any questions in the meantime, you can email us at **contact@transformingforensics.co.uk**. We look forward to hearing from you.

⁴ £4 return on each £1 invested expected from approximately the 3rd full year of operation.



www.fcn.police.uk
(coming soon)

contact@transformingforensics.co.uk