



Association
of Police
Authorities



Science and Innovation in the Police Service 2010-2013



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Foreword

Science and innovation have never had a more important place in the police service.

By taking science seriously in the past, we have helped to ensure that British policing remains the envy of the world today. Many of the capabilities identified for further research by the predecessor of this strategy are already in daily use on the front line.

But as the pace of scientific discovery increases, and as the police service faces new challenges, we cannot afford to stand still.

This document sets out an ambitious delivery programme that will equip officers with major new capabilities in the years ahead.

However, we recognise the need to do more than improve the 'toolkit' available to officers.

A successful approach to science and innovation needs to put public confidence first, for example, by meeting the public's legitimate expectations about personal privacy.

Robust research needs to be delivered in a way that equips officers with the knowledge they need to take decisions on the basis of what has been proved to be effective.

And to get the best from our investment, clear priorities are needed that direct finite resources to where they will deliver the greatest benefit.

To deliver the objectives of this strategy, we're not only committed to working together, but also with our partners in industry and within the research community. By doing so, we will help to ensure that the police service in England and Wales continues to harness science effectively and remains one of the most innovative of its kind in the world.

Science and innovation have never had a more important place in the police service.

Executive Summary

A century after the creation of the UK's first fingerprint bureau, the pace of change in police science is still accelerating.

Major advances have been made. But to meet new challenges in a changing world, science and innovation need to be harnessed more effectively than ever before. Finite resources available for research and development need to be directed to where they will have the biggest impact in meeting key challenges such as cost-effectiveness, organised crime, and the continued need to support public confidence.

In the last year, the police service has helped to strengthen the role of science in protecting the public by supporting new science strategies by the Home Office and the UK's counter-terrorism programme, known as CONTEST¹.

The latest Home Office Science and Innovation Strategy included a commitment to work with the National Policing Improvement Agency (NPIA) to develop a strategy specifically focused on policing issues on

behalf of the police service in England and Wales.

This strategy sets out key activities for police science and innovation over the next three years. These include the delivery of critical new capabilities for officers such as information sharing through the Police National Database (PND), the ability to manage evidence digitally, and new forensic techniques such as rapid DNA testing in custody suites and at crime scenes.

Because public confidence is at the heart of what we do, this strategy sets out the principles we apply to strike a proportionate balance between the need to protect the public and safeguard their personal privacy.

This strategy also marks a stronger focus on the need to build knowledge about effectiveness in policing and put this in the hands of officers. This includes a commitment to build a stronger partnership with the research community and the private sector. For example, we will publish the key knowledge gaps in evidence in order to help prioritise future research.

Because no organisation can innovate successfully on its own, this strategy sets out specific measures to increase the effectiveness of multi-agency collaboration to support the police service in:

- establishing clear and agreed priorities for police science and ensuring that the delivery of these is effective and joined-up;
- enhancing the transfer of innovation across different areas of policing;
- forging stronger relationships with the research community and the private sector.

This strategy therefore provides the basis of a stronger partnership where public bodies, the research community, and the private sector work together with the police service.

¹ Science and Innovation Strategy 2009-12, Home Office, 2009; The United Kingdom's Science and Technology Strategy for Countering International Terrorism, HM Government, 2009.

1. The Innovation Challenge

Successful policing relies on scientific innovation.

To meet new challenges in a changing world, and to build on the best of our efforts to serve the public, we need to harness cutting-edge knowledge more effectively than ever before.

This document sets out the next steps to build on the strong track record of police science that will help equip officers to meet the policing challenges of the future.

1.1 This chapter sets the context for the police science and innovation strategy by describing some of the pressing challenges facing police officers and those that support them.

1.2 Chapter 2 highlights the range of ways that the police service has harnessed research in order to serve the public more effectively. It sets out areas for future progress and describes in practical terms what success looks like.

1.3 Chapter 3 presents the next steps for police science based on the principles of coordination, collaboration and challenge. In line with these, it sets out concrete new measures to increase the impact of science and innovation in the future.

1.4 The purpose of this strategy is to provide the many different organisations involved in supporting the police with a framework that aligns their individual activities to common aims. It provides an important contribution to the goals of the 10 year framework for building police capability, which is published alongside this document².

1.5 Like the Home Office Science and Innovation Strategy³, this document spans the full spectrum of scientific disciplines, including physical, social and technical science. In fact, the need to integrate learning from different specialist areas will be a key theme of our future work. This strategy works across the cycle of commissioning, investment, research, development, acquisition, deployment and evaluation.

Today's Policing Challenges

1.6 We know that in the years ahead, the police service will face complex challenges, especially in relation to crime threats, cost-effectiveness and confidence. This section provides a snapshot of these and of the role of innovation in addressing them.

² Building Capability: A Ten Year Strategic Framework, National Policing Improvement Agency, 2010.

³ Science and Innovation Strategy 2009-2012, Home Office, 2009



1.7 Together with national enforcement agencies, police forces protect the public against serious criminal and security threats that are increasingly complex and potentially more damaging than they have been in the past⁴.

1.8 Within local communities, police officers are working in new ways to promote local confidence, exemplified by the Policing Pledge. They are increasingly engaged with a more informed public. Citizens have clearer entitlements over the way that policing is delivered within their communities, for example, over priorities such as anti-social behaviour.

1.9 All public services face a continued productivity challenge over coming years. This includes government requirements to deliver savings within police budgets of at least £545m per year by 2014, including at least £100m of savings in 2010/11. Achieving this, whilst continuing to improve front-line delivery, demands new ways of increasing cost-effectiveness.

1.10 To be prepared for the future we need to understand the drivers that will affect policing in the years ahead and reflect these in our decisions about priorities for new research and development.

1.11 Both the UK's Science and Technology Strategy for Countering International Terrorism and the Home Office Science and Innovation Strategy have stressed the importance of horizon scanning in setting priorities for research and development.

1.12 Building on this, the NPIA is in the early stages of new work to assess the potential impact of a range of long-term factors which could affect policing. Initial results have identified a number of areas where the service may face disruptive new challenges, including:

- environmental issues, such as the need for forces to find radical ways of minimising their carbon footprint;

Modern Crime and Security Threats

- Between 25,000 and 30,000 criminals engage in organised crime; generating over £20 billion of social and economic harm within UK communities each year.
- New technology, particularly the internet, is facilitating traditional crime in new ways, as well as creating new sources of harm – including a 250 per cent increase in the number of malicious computer programs in 2008 alone.
- While terrorism is not new, the current threat is different from those we have faced before in its scope, capability and ambition. The UK and its interests remain prominent targets for terrorist organisations which have an international cause, plan and conduct attacks in and from a range of countries, and aim to inflict significant civilian casualties.

⁴ Extending our Reach: A comprehensive approach to tackling serious organised crime. Home Office, 2009.



- technical challenges, such as the criminal exploitation of privacy enhancing technologies;
- geographic issues, such as the changing boundaries between public and private space; and
- social issues, such as changing public attitudes about the individual's role in the criminal justice process.

Meeting the Challenge

1.13 Today's policing challenges make an effective approach to scientific innovation more important than ever.

1.14 Serious criminal and terrorist networks are themselves highly innovative and adaptable. Our continued technical pre-eminence is vital in order to disrupt these threats and protect the public from the harm they cause.

1.15 Community confidence in the police has always rested on the professional excellence of officers and staff. This professionalism relies on a strong innovation culture where new ideas are identified, tried, assured and shared.

1.16 To support cost-effectiveness and to drive future improvement, we need a systematic approach to science and innovation so that:

- decision makers in the police service have the evidence base they need to make decisions about investments and interventions that deliver the best public outcomes;
- operational officers have the capabilities they need to act more quickly and more autonomously, supported by the best information and intelligence available;
- technical and scientific improvements, particularly in relation to information technology, are used to reduce the cost of police management.

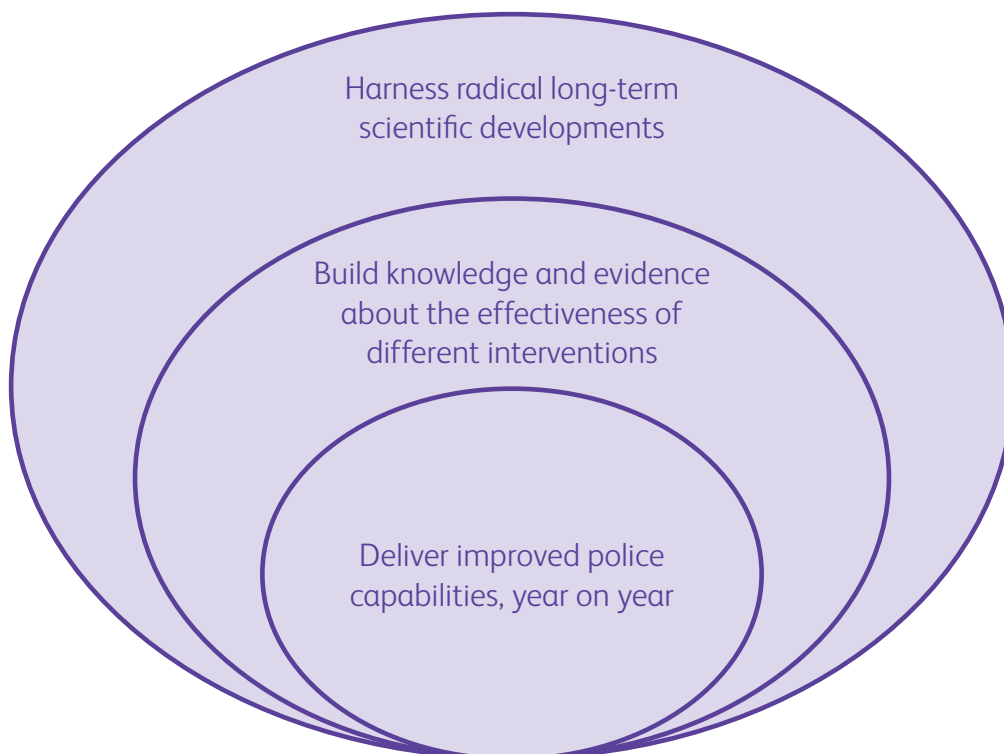
*Today's
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Our Goals

1.18 Science and innovation have a central role in helping the police service meet complex challenges like those highlighted in the previous section. Specifically, they can support three objectives that provide the central goals of this strategy. These are:

- over the short term, to use innovative science and technology to **improve capabilities and safeguard public confidence** across the broad range of policing activities;
- over the medium term, **to create, assure, share and use knowledge** so that policing decisions are supported by robust knowledge about the impact and effectiveness of different approaches; and
- over the longer term, to **harness the potential of science and innovation** to tackle the most important policing challenges of the future.

Supporting the police over the short, medium and long term





1.19 To deliver these aims, we need an approach that is rooted in three key principles for action. These are:

- **Coordination** – where there are clear priorities for police science and innovation and where the different activities of the organisations involved align together to have maximum impact;
- **Collaboration** – where research and development work engages police officers and the public; and where specialists from different sectors and disciplines work together – encouraging innovation to transfer from one area to another;
- **Challenge** – where investment in innovation is targeted to where it will deliver the strongest benefits; where these are realised faster than in the past; and where we challenge others to help address the most pressing police needs of the future.

1.20 Science and innovation are amongst our most powerful resources for improvement. New challenges in policing, and the quickening pace of scientific discovery, mean that a strong approach to innovation is more important than ever.



Our Goal: Police Science and Innovation in 2013

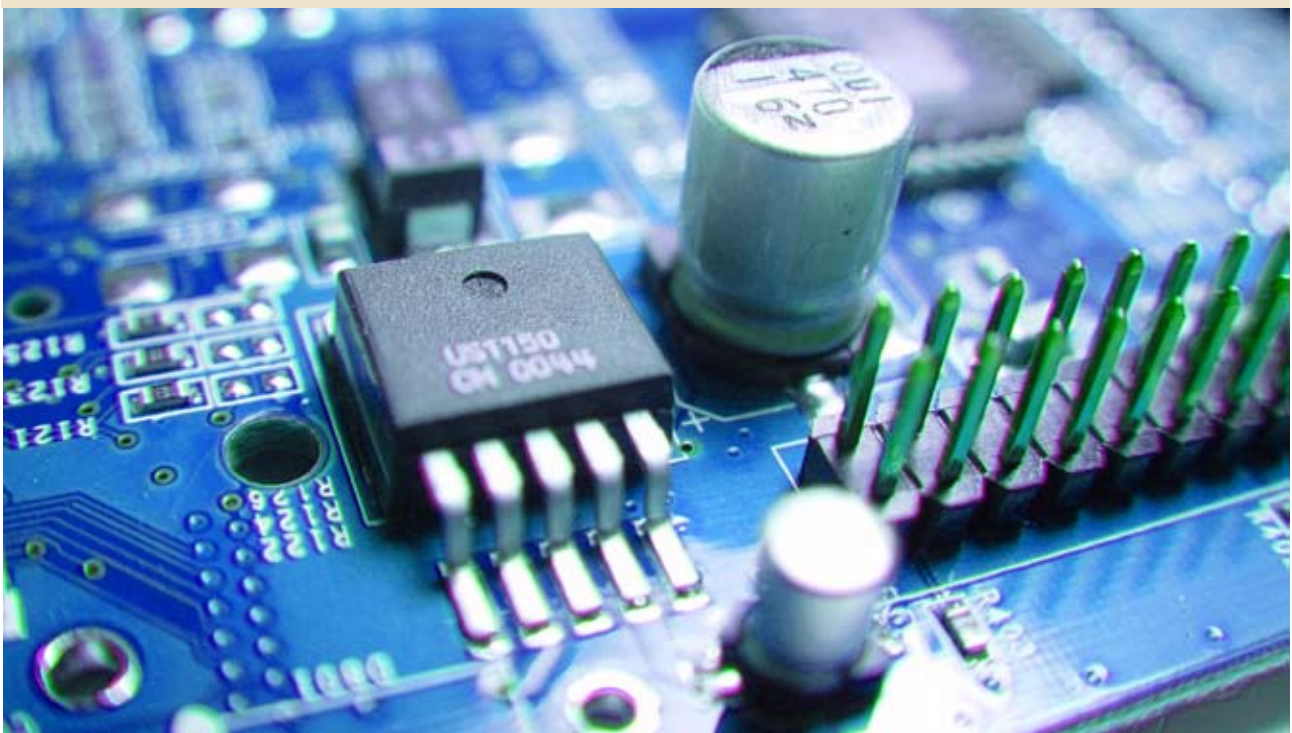
In 2013:

Members of the public agree that their community is policed more effectively than in the past and agree that the police service is committed to improving continuously. Personal contacts with the police inspire trust in the service – promoting greater support for crime prevention. The public agree that the police deploy scientific and technical capabilities in an assured and proportionate way.

Police officers deliver a greater impact because activities that would have taken hours and days are now completed in minutes and at the point of need. Individual officers have new capabilities to deliver a range of specialist scientific tasks. Officers collaborate more effectively because more of their key systems are better integrated together. Officers understand the evidence that supports their choices between different interventions, contribute to it, and act on it.

The police service has released £100s millions of savings for the front line including through collaborative delivery of scientific and technical capabilities. It has clear and joined-up science priorities for the future, based on critical assessment and scenario planning. It has the influence with the research and supply community to secure their delivery. It has a science-based culture, where action is underpinned by evidence.

The research and supplier community applies its full potential for innovation to help solve police problems effectively. Research and development programmes are well aligned to meet police needs. It understands police priorities, knows how to engage the service effectively, and often works directly in partnership with police forces and agencies.



2. The Story So Far

Over the last two decades, the police service has innovated at a rapid pace. No area of policing has been untouched by this change and some capabilities have been transformed radically. This record provides a foundation for strong progress in the future.

This section summarises today's landscape for police science, including important areas of progress and the critical role of partnership. It highlights areas where further progress is needed and sets out a vision of the future. This will guide a stronger commitment to innovation over the next three years.

Building evidence

2. The police have a track record of applying research and development. Every day, the benefits of this are seen in a modern service that saves lives, earns public trust, and brings criminals to justice.

2.1 In the last two decades, links between the police and the research and academic community have helped to increase evidence about which approaches to policing have the biggest impact.

2.2 For example, the police service has developed new strategies of crime prevention and control (such as problem orientated policing and hot spots policing). It has pioneered new analytical and statistical techniques to support these. Crime analysis is now an established part of core police business and new methods are being explored to increase its predictive power.

2.3 Research has driven changes in police practice itself. For example, the national roll-out of Neighbourhood Policing was built on robust evaluation. The support and advice provided to victims owes much to research into the nature of victimisation and offending. Insights from

behavioural sciences have shaped the ACPO Murder Investigation Manual and driven the professionalisation of Behavioural Investigative Advisors.

Building capability

2.4 Investment in science and innovation has underpinned major improvements in the capability of the police service, providing powerful new tools to help protect the public more effectively.

2.5 In some areas, these capabilities have led directly to major improvements in the fight against crime. For example, 17, 463 crimes were detected in which a DNA match was available in 2008/09, including 70 homicides and 168 rapes⁵. In other areas, the benefits are felt in a service that can act faster and more effectively than in the past.

⁵ National DNA Database Annual Report, 2007-2009

Building Our Capability

Information at the point of need

Information is the lifeblood of effective policing. Stronger integration between information systems is equipping officers with the knowledge they need to act quickly in the field:

- There has been a 10 per cent growth in demand on the Police National Computer (PNC) each year, reaching 185 million transactions in 2008.
- Intelligence can now be identified and shared faster across force boundaries – with 410,000 hits on IMPACT Nominal Index in five months.
- 43,000 frontline users are now equipped with a mobile device – up 32,000 since 2008. Officers report that they are able to stay out of the police station and visible to the community by around 30 minutes longer per shift as a result.
- Within twelve months, the Police National Database (PND) will enter its first phase, helping police officers bypass the risk and delay caused by 65 million records split between 270 operational systems.

Managing identity

Few capabilities are as fundamental to the prevention and investigation of crime as the ability to establish an individual identity. Recent improvements include:

- The time from recovery of fingerprints to identification being reduced from up to 17 days to two days – with one return delivered in 13 minutes.
- New research into accelerated DNA profiling, which shows the potential to reduce the times to process DNA samples from over four days to less than an hour.
- Groundbreaking work to develop national fingerprint records to include other kinds of print. This has improved the detection of crime scene marks by 15 – 20 per cent.
- Linking road traffic checks to mobile fingerprint systems – with field trials demonstrating savings of 88 minutes in wasted time per stop.
- The roll-out of new Livescan technology for checking prints in real time, delivering a 21 per cent return on investment.
- The identities of 1.5 million arrestees or detainees verified each year. Also, by sharing data with the UK Border Agency, immigration officials can now check the criminal history of visa applicants.

Building cost-effectiveness and inter-operability

2.6 Before an innovative capability can become an everyday part of policing, it needs to be delivered in a way that secures value for money and makes it easier for police forces to work together. Measures to help promote this have included:

- **Developing essential national standards:** based on rigorous scientific testing. These help build the market to meet police needs at lower cost and encourage inter-operability at consistently high-levels. For example, standards for

equipment developed by the Home Office Scientific Development Branch (HOSDB) have helped establish a market for police body armour that meets the majority of weapon threats but is stronger, lighter and more flexible.

- **Integrating key systems and services:** fragmentation between key systems increases risk, delay and cost into policing. The Information Systems Improvement Strategy (ISIS) has been established to increase police capability through more integrated information systems, with a target to realise savings of over £200m from the end of 2013/2014. The ISIS programme will be published later this year.

- **National procurement:** national framework agreements, such as the National Forensic Framework Agreement (NFFA), are helping to increase police influence in the science market to drive down cost and promote a common platform for essential services.

This document has shown how scientific innovation is being applied throughout the police service. This record includes major successes that have helped the police act more effectively and supported their efforts to bring offenders to justice. However, further steps are needed in order to build on the lessons of police science in recent years.

Case Study: National Forensic Framework Agreement (NFFA)

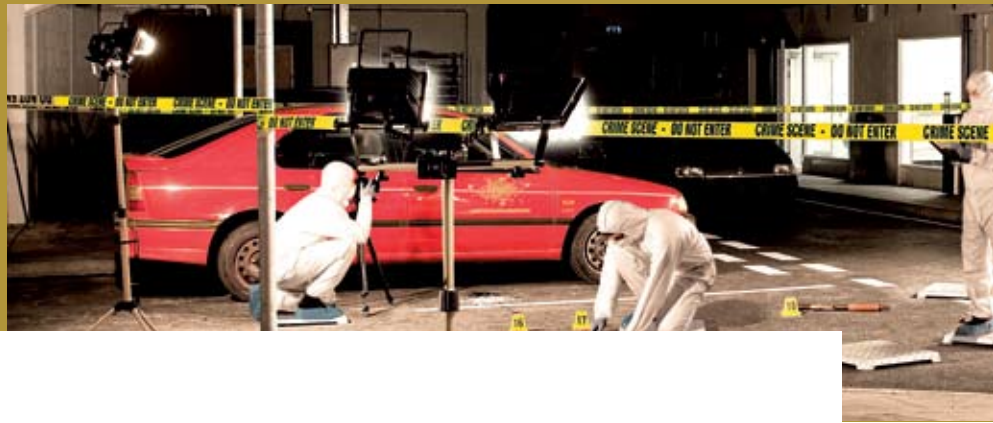
The police service in England and Wales spends approximately £169m a year buying forensic analysis services. The Government's 2009 Policing White Paper⁶ highlighted how the National Forensic Framework Agreement (NFFA) is reforming the procurement of these services, improving service and saving money.

The framework has improved delivery of forensic services for police forces through its focus on quality, price and timeliness backed by detailed service specifications and standards. Forces no longer have to undertake extensive work to negotiate individual contracts themselves, reducing costs alongside improved service.

Savings

Early indications are that forces save 10 per cent on DNA services and around 12-15 per cent on drugs services. The total forecast benefit from 2008/09 – 2012/13 is over £15m.

6 Protecting the Public: Supporting the Police to Succeed, Home Office, 2009



The Scientific Challenges Ahead

2.7 We believe that we can and should go further to put science and innovation at the heart of the police service, especially by:

- building better evidence about effective practice and mainstreaming the best of **what works**;
- **developing clearer priorities** for science and innovation that target finite resources to where they will deliver the best results;
- strengthening the place

of **public confidence and trust** in our approach to science;

- **working together** to deliver better results, faster, and for less cost.

Evidence about what works

2.8 Officers say that they want easier access to knowledge that helps them plan, make decisions and improve practice. Specifically, they want access to knowledge about 'what works' and information about how to interpret and use that knowledge in practice.

2.9 Reviews of policing research show that overall, evidence of 'what works' in policing is less developed than some public services, especially health. Also, funding for social science has historically focused on understanding criminal behaviour and its sociology rather than developing understanding of the effectiveness of applied policing.

Case Study: A Joined-up Approach to Knowledge

To build the evidence base about effective policing and put this in the hands of officers, a cross cutting Knowledge Programme is being developed as an early priority of this strategy. Its goals are to:

- **Create knowledge** by extending the good empirical base that exists for some areas of policing with wider coverage of the most important gaps in our knowledge about what works, when and at what cost.
- **Assure knowledge** used to inform police practice by clarifying its source and quality; and the strength of evidence presented.
- **Share knowledge** by improving how the service shares evidence, knowledge and innovation; enabling the service to act as a co-producer of knowledge.
- **Equip the service to use knowledge** by helping practitioners and decision makers to improve their skills and confidence in seeking, interpreting and using evidence and knowledge in decision making.



Setting stronger priorities

2.10 Recent experience has shown the importance of ensuring that priorities for new science align more clearly to the capabilities officers need the most, now and in the future. For example:

- A consultation as part of the Information Services Improvement Strategy (ISIS) has found important gaps between the technology officers feel they need to do their job, and the technology they actually have. The ISIS programme, which will be published later this year, has put front-line officer feedback at the heart of its approach to priorities. This collaborative approach provides important lessons for the future.
- Both the Home Office Science and Innovation Strategy and the police service's work in support of CONTEST, led by the Office of Security and Counter Terrorism (OSCT), have shown how more systematic use of scenario planning can provide critical new insights to generate stronger priorities to help address potential threats to public safety. As described,

the application of futures approaches in a range of policing contexts is being tested by the NPJA.

Safeguarding public confidence and trust

2.11 We will work together to ensure that scientific development activity delivered under this strategy matches up to key principles that safeguard public confidence and trust. These principles include:

- **Necessity** – where data is only collected when there is a compelling need for doing so.
- **Legality** – where there is compliance with relevant privacy legislation.
- **Proportionality** – where we apply a proportionate approach so that sensitive data and surveillance techniques are used only for serious purposes.
- **Protection** – where only assured and accountable authorities hold or access sensitive data; where there are tight controls of individual access and where there is strong protection against the risk of data loss.

Working together

2.12 All innovative organisations – public or private – need to work together with partners to deliver the best results. But this requirement is particularly important in the law enforcement arena where a complex, multi-agency landscape is involved in the delivery of science.

2.13 We know that working together – between police forces and with partners in industry, government and academia – has a decisive impact on our ability to innovate successfully. The financial price for poor partnership is high, including:

- duplicated procurements for the same capability, followed by multiple sets of supplier-management costs;
- lost opportunities to capitalise on our collective buying power and authority. Our partners in the private sector and research community need a clear, persuasive prospect for future markets to provoke investment in meeting police needs;

- sub-optimal use of similar resources – for example, opportunities have been missed to develop shared information assets such as data centres.

2.14 This underscores the need for a multi-agency approach to innovation that focuses hard on cost effectiveness.



3. Delivering in Partnership

The successful management of science and innovation will be crucial to achieve our long term goals for police improvement.

Our objectives are to improve police capability cost-effectively, use evidence to drive action, and to harness science to tackle the most important policing challenges of the future. We will reinforce our approach to science and innovation on the basis of the three core principles; coordination, collaboration and challenge.

A Stronger Framework For Delivering Police Science

3. This section describes how we will increase our impact by working more closely together.

3.1 The delivery landscape for police science and innovation is diverse. Including in the public sector:

- The **Home Office** Chief Scientific Advisor sets the framework for all science and innovation across the Home Office family, supported by the Director of Science, Engineering and Technology and Director of Social Science and Chief Economist. Between them they are responsible for the strategic direction, co-ordination, quality and professional standards of all science across the Home Office family.
- The Home Office also delivers a substantial programme of strategic research to support policing policy, effectiveness and value-for-money. This currently includes several large, long-term evaluations, for example on integrated service delivery, neighbourhood agreements and serious organised crime taskforce pilots, as well as in-depth research on public confidence, and equality and diversity in the police workforce.
- The **Home Office Scientific Development Branch** (HOSDB) provides high quality scientific and technical advice, innovation and support to all parts of the Home Office and its agencies. Within this broad remit, HOSDB has a key role in providing policing with impartial scientific support and advice, helping to ensure that existing solutions remain effective over time and working with industry, academia and others to make new and more efficient capabilities available to the frontline.
- The **National Policing Improvement Agency** (NPIA) delivers major scientific and technical programmes on behalf of the police service, such as Forensics 21, Police National Database (PND), IDENT and ISIS. It is responsible for a major analytical and social science programme that builds knowledge about effective policing. It supports

the development of essential national standards in technical areas and the implementation of these through training.

- In a number of specialist areas such as counter terrorism, the investigation of e-crime, and the protection of children online, police organisations have developed dedicated scientific and technical programmes with partners in industry, government and the research community.
- The UK's **Research Councils** provide public funding to support the development of new research by the UK's scientific community.

3.2 An effective approach to science and innovation requires strong engagement by a diverse range of organisations, where individual contributions add up to a coherent programme. To make the delivery of police science more effective, key priorities in 2010 will include:

- the delivery of an agreed **framework of priority requirements** based on consultation with the police service and scientific community which will be updated at least annually. These priorities will be

validated by ACPO and agreed by the Policing Portfolio Group⁷;

- a **delivery programme** to ensure a clear alignment between police priorities on the one hand and the activities of the different organisations involved in police science on the other;
- **stronger relationships** with police science partners in government departments, key laboratories, research councils and major universities, to shape and influence their work so that it contributes to police priorities.

3.3 For the first time, police decision makers will be able to consider the overall portfolio of police science activities in a multidisciplinary way, and to shape this to ensure it addresses the issues that matter most to officers.

⁷ The Policing Portfolio Group (PPG) is a sub group of the National Policing Board (NPB). It is the sole tripartite authority for the National Policing Portfolio. It has responsibility, on behalf of the NPB, for commissioning, planning and de-commissioning decisions relating to proposals from delivery agencies and policy partners.

Counter Terrorism Capability

The Office of Security and Counter Terrorism's innovation programme, known as INSTINCT, provides a focus point for collaboration with industry at the cutting edge of new technology and science.

To support this, ACPO will identify the lessons from police counter terrorism operations and debriefs in order to develop the police user requirements to be explored with industry and academic institutions through the INSTINCT initiative and the wider CONTEST strategy.

3.4 The NPJA will be responsible for supporting a programme to deliver this, and specifically the priorities outlined in Table 1. It will work within the framework of quality, coordination and professional standards which is set by the Home Office Chief Scientific Advisor and relevant directors.



3.5 Responsibility for the delivery of different elements of a police science and innovation programme will fall, as now,

to different organisations. However, these arrangements will deliver stronger strategic direction and help the service

direct the overall portfolio of science activities.

Table 1: Police Science Development: Priorities for 2010/11

Coordination

1. Develop an agreed set of police requirements for research and development, based on consultation with the police service and the research community, and agreed by the Policing Portfolio Group (PPG).

Collaboration

2. Tackle gaps and overlaps in the overall programme of police science, and ensure its alignment to police priorities.
3. Establish a stronger network of police science stakeholders to help identify opportunities and requirements for the future development of police science.

Challenge

4. Shape and influence the priorities of partners in government departments, public laboratories, research councils, and major universities, and provide a co-ordinating point for engagement.
5. For all major science and technology programmes, consider future opportunities to transfer innovation to other areas of police improvement.
6. Act as a champion and custodian for the professional and ethical assurance of police science and innovation activities, within the framework set by the Home Office Chief Scientific Advisor and relevant directors.



Delivery Now

3.6 These efforts will help to secure the continued contribution of research and development to the police service. But whilst stronger strategic direction over science is vital, it does not remove the need for new capabilities and skills to be delivered in key areas in the short term.

3.7 A series of practical actions to strengthen our ability to innovate are set out in the Annex below. Some of these reforms are already underway and support the plans set out in the Home Office Science and Innovation Strategy and in the UK's Science and Technology Strategy for Countering International Terrorism.

Innovating In Partnership

3.8 To sustain progress, we need to work to play a part, within the police family, within government, and within the wider research and academic community.

ACPO

- Acting as a champion and custodian of police interests in science and innovation as a whole.
- Engaging officers widely to help develop the key priorities for new science and innovation work.
- As part of the Policing Portfolio Group (PPG), agreeing and 'owning' the strategic science and innovation priorities for the service. Considering strategic gaps, risks and dependencies across the range of police science activities.
- Promoting the growth and use of the evidence base on effective policing.

APA

- Providing guidance to police authorities on achieving maximum efficiency and effectiveness, and value for money within the police service.
- Through the Policing Portfolio Group (PPG), agreeing and 'owning' the strategic science and innovation priorities for the service. Considering strategic gaps, risks and dependencies across the range of police science activities.
- Assuring and challenging the take-up by police forces of the best scientific evidence available.
- Acting as a champion for effective collaboration at the regional and national level on science and technology based services.
- Helping to shape the research and development priorities of the future.



Police Forces (and other police agencies)

- Building and using evidence about innovative policing, for example, by making use of the 'knowledge bank', delivered by the NPIA through the Police Online Knowledge Area (POLKA).
- Strengthening relationships with the private sector and research community to help solve police problems.
- Driving collaboration at the regional and national level on science and technology based services.
- Understanding and incorporating the best evidence into policing activities.
- Helping ACPO business areas develop strong priorities for further research and development.

Home Office

- As part of the Policing Portfolio Group (PPG), agreeing and 'owning' the strategic science and innovation priorities for the service. Considering strategic gaps, risks and dependencies across the range of police science activities in partnership with the police service.
 - Promoting the delivery of police science priorities by others by engaging research councils and using Home Office scientific capabilities to help meet police requirements.
 - Through the Policing and Serious Organised Crime Analysis and Research (PSOCAR) Group, delivering a major programme of social research and analysis to underpin policing policy development and evaluation.
- Through the Home Office Scientific Development Branch (HOSDB) contributing to the development and delivery of an integrated science and innovation programme by:
 - helping to identify requirements and options for police science and technology innovations;
 - linking the science and technology needs of policing to the wider needs of the Home Office (UKBA etc) and government;
 - providing impartial scientific advice and oversight;
 - providing technical support and advice to the police in the field;
 - developing new equipment and techniques, in partnership with the suppliers of science and technology, where key capabilities cannot be met by existing options.

NPIA

- Managing the establishment and delivery of an agreed framework of science and innovation requirements on behalf of the police service, agreed by the Policing Portfolio Group (PPG).
- Acting as the intelligent client of an integrated delivery programme to meet police requirements, by:
 - delivering major scientific and technical programmes on behalf of the police service, such as Forensics 21, Police National Database, IDENT and ISIS, and social science programmes;
 - promoting police priorities with government departments; public laboratories; research councils, and major universities, and acting as a coordinating point for engagement.
- For all major science and technology programmes, considering future opportunities to transfer innovation to other areas of police improvement.
- Supporting the effective delivery of essential national standards related to police science.

The Scientific and Research Community

- Engaging with the NPIA and others to help identify key police requirements and identifying opportunities to work together to address these through research and development.
- Helping the police service to identify the potential to transfer innovation from industry and elsewhere to meet police needs.
- Recognising the major contribution of science and innovation in a policing context to help to reduce harm and safeguard public wellbeing.
- Working collaboratively with police stakeholders to help maximise the impact of new research.

Annex: Delivery Priorities

This section outlines key areas of delivery across the police service and the Home Office to support the police over the next three years. The time scales vary and this overall portfolio of activity will be reviewed annually. In many cases the delivery of these initiatives is a shared responsibility across different organisations.

Objective 1: To use innovative science and technology to improve capabilities and safeguard public confidence across the broad range of policing activities, we will:

Investigating crime

- Pilot “rapid DNA” testing technologies, delivering enhanced capabilities to custody scenes and crime scenes by 2011.
- Support officers’ forensic skills through the roll-out of new advice on improving forensic processes.
- Deliver more powerful capabilities to search and match footprints through the National Footwear Database by 2011.
- Increase the cost effectiveness of specialist forensic equipment and services, such as digital forensics, by strengthening national procurement frameworks.
- Deliver a new Forensics Quality Standard to assure key forensic processes nationwide by 2012.
- Publish new standards for CCTV image quality and recording in support of the National CCTV Strategy and develop training courses for CCTV viewing competency and video data recovery by 2011.
- Develop national guidance for the police use of body worn video devices which will be published by 2010.
- Update the “Manual of Search and Detection” annually based on continued testing of detection technologies against police operational requirements, to counter the risks from terrorism, and for reducing violent crime on the streets.
- Continue to increase the operational and cost effectiveness of familial DNA products used in criminal investigations.

(...cont) Objective 1: To use innovative science and technology to improve capabilities and safeguard public confidence across the broad range of policing activities, we will:

Transforming information systems

- Deliver the first elements of the Police National Database (PND), allowing police intelligence to be shared across force boundaries by 2010, with further functionality to follow in 2011.
- Deliver a three year delivery plan for the Information Services Improvement Strategy (ISIS), including action to:
 - Streamline officers' access to national data services with a single digital identity ('Identity Access Management').
 - Improve officers' ability to identify individuals by making custody images available through the Police National Computer (PNC), via any device including officers' mobile terminals.
 - Replace analogue systems for recording interviews with digital technology, reducing risk, cost of storage, and improving access to interviews for the police and the wider criminal justice community.
- Establish the best options for a national approach to managing evidence digitally by 2011.

Promoting police and public safety

- Test the effectiveness of tools to predict crime hot spots by 2011.
- Maintain and develop standards for officer personal protective equipment, including a new standard for public order shields and a revision to the requirements for slash protection by 2010.
- Provide a remote immobilisation capability for high risk/consequence vehicles by 2010.
- Standardise the fitting of specialist equipment to police vehicles in a cost effective way via the 'Single Vehicle Architecture' concept by 2010.



Objective 2: To create, assure, share and use evidence so that policing decisions are supported by robust knowledge about the impact and effectiveness of different approaches, we will:

Create knowledge and evidence

- Continue to build on existing collaborative research projects with various research councils and academic institutions at national and international levels.
- Identify and share the key gaps in police science knowledge with the research community to help build a stronger partnership and support future joint working.
- Evaluate the effectiveness of different approaches in key police improvement areas by 2010, including: supporting public confidence through the provision of information about policing and crime; and making it more efficient for officers to record crime.

Assure knowledge and evidence

- Identify, assure and share the best evidence available on key police improvement issues by 2010, including: the effectiveness of CCTV and Automatic Number Plate Recognition (ANPR); supporting police leadership and training; serious crime investigation; and the better management of risk.

Share knowledge and evidence

- Establish an online resource that promotes knowledge sharing amongst the police community – the Police On-Line Knowledge Area (POLKA) – by 2010.
- Maintain a ‘knowledge bank’ of research and practice based knowledge and make this available on POLKA by 2010.
- Through the Home Office Policing and Serious Organised Crime Analysis and Research (PSOCAR) Group, build the evidence base to support policing policy, including assessments in support of:
 - effective Neighbourhood Policing and integrated service delivery;
 - options for improving public confidence further, through a better understanding of local concerns and the levers for addressing them;
 - equality and diversity in the police workforce, including a better understanding of female and black and minority ethnic (BME) officers’ experiences and concerns, and how they may best be addressed.



(...cont) Objective 2: To create, assure, share and use evidence so that policing decisions are supported by robust knowledge about the impact and effectiveness of different approaches, we will:

Use knowledge and evidence

- Make more of the knowledge base actionable for police by applying it through the National College of Police Leadership; Capability Support programmes; and improvements to guidance.
- Identify and deliver options to support the skills and professional development of analysis and research in police forces, building on their pivotal role in supporting crime reduction.
- Ensure that police officers are better able to judge the appropriateness and quality of knowledge sources and advice used in decision making by 2012.



Objective 3: To harness the potential of science and innovation to tackle the most important policing challenges of the future, we will:

Preparing for the future

- Develop a clear framework of priorities for research and development across the scientific disciplines, by 2010.
- Evaluate and then apply the best uses of horizon scanning and 'futures' techniques and apply these to support the development of stronger science priorities for the future.
- Conclude and report on a major operational pilot on the deployment of state-of-the-art non-cooperative facial recognition systems (Project FALL) by 2012.
- Deliver innovative technical surveillance equipment to help counter serious, organised crime and terrorism, and improve the capability of the police service's Technical Surveillance Units.

Building on our investment

- Critically assess the future opportunities to strengthen the impact of major technical assets, including mobile communications; the Police National Computer (PNC) and the future development of the Police National Database (PND).
- Deliver the roll-out of the National Forensic Framework Agreement (NFFA) via the force/regional mini procurement competitions, achieving an estimated £15m of savings for the police service.
- Build on rapid DNA developments by researching the law enforcement benefits of new DNA profiling chemistry capabilities.

Safeguarding trust

- Confirm that all police science capabilities match up to robust personal privacy principles by 2010.
- Deliver stronger mechanisms for the technical and ethical assurance of standards of police science and research by 2011.

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- Economic Social Research Council (ESRC)
- Forensic Regulator
- Government Office for Science (GOS)
- Higher Education Funding Council (HEFC)
- Home Office
- Identity and Passport Service
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- National Policing Improvement Agency (NPIA)
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- Office for Security and Counter Terrorism (OSCT)
- Research Councils UK (RCUK)
- Serious Organised Crime Agency (SOCA)
- Technology Strategy Board (TSB)
- University College London (UCL)
- United Kingdom Border Agency (UKBA)

Acronyms

ACPO	Association of Chief Police Officers	PPG	Policing Portfolio Group
ANPR	Automatic Number Plate Recognition	PSOCAR	Policing and Serious Organised Crime Analysis and Research
APA	Association of Police Authorities	SOCA	Serious Organised Crime Agency
BME	Black and Minority Ethnic	TSB	Technology Strategy Board
CEOP	Child Exploitation and Online Protection	UKBA	United Kingdom Border Agency
CONTEST	Counter terrorism Strategy		
HOSDB	Home Office Scientific Development Branch		
IDENT1	Fingerprint Identification Database		
IMPACT	Intelligence, Management, Prioritisation, Analysis, Coordination and Tasking		
ISIS	Information Services Improvement Strategy		
NFFA	National Forensic Framework Agreement		
NPB	National Policing Board		
NPIA	National Policing Improvement Agency		
OSCT	Office for Security and Counter Terrorism		
PNC	Police National Computer		
PND	Police National Database		
POLKA	Police Online Knowledge Area		