Lee Howell
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29th September 2017

Dear Lee

**Avon and Somerset Multi-Agency Integrated Services Analytics Hub Project**

It was good to talk to you earlier following your discussions with Andy Marsh and Sue about the Project. Andy asked me to drop you a line with an update on the bid and some initial thinking on implementation. As you know Avon and Somerset Constabulary, supported by the PCC, submitted a Multi-agency Integrated Services Analytics Hub bid to the Home Office Police Transformation Fund back in March of this year. Originally it was intended that applicants would be informed whether or not they were successful in May of this year. However, the decision to call a General Election delayed the outcome of this process. As a number of data analytics bids were received in the original applications we were then notified that the Home Office had commissioned a consultancy to review the different bids and make recommendations about which were allowed to proceed.

The Police Transformation Board has now written to us to inform us that the recommendation of the consultants and the gateway group was that the Avon & Somerset proposal should proceed and be supported by the Police Transformation Fund with total funding of £3.15m. That recommendation will now proceed to a Home Office validation panel on Monday 2nd October and then for decision by the Home Secretary shortly thereafter. Given this positive endorsement of the approach it has been agreed that we would undertake some preliminary planning in relation to implementation.

As you know the original project was structured to report to existing effective multi-agency collaboration governance structures including the Avon & Somerset Chief Executive Forum and the South West Emergency Services Grouping of which you are the Chair of the Operations Group. At the time of submitting the bid it was discussed with yourself, the PCC and the Chief Constable and the then Chair of the Devon & Somerset Fire Authority that given the existing effective multi-agency work in which you play such a key part, and the crucial importance of effective integrated data exchange and analysis that you would be extremely well placed to provide a Senior Responsible Officer leadership role to this programme.

I am writing therefore with some initial thoughts which I have discussed with the PCC and the Chief Constable to enable you to have initial conversations internally in advance of the Home Secretary's decision. These are merely initial ideas at this stage and we are happy to

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discuss with you and/or the Fire Authority and develop them further. As above, we have not received confirmation yet that we will receive the funding.

- The bid as drafted has provision for a Programme Director role with an allowance of £70,000 a year for 2 years. Of course the first year is now effectively a half year. Given your extensive collaboration experience and seniority we think it would be preferable to make this a Senior Responsible Officer role. The role would involve leading a team which would include a Project Manager and various other posts which we would finalise with you. The SRO role would involve liaising and "corralling" senior leaders within the many partner organisations to sign up to the programme and to ensure senior buy in to the process as well as overseeing delivery by the programme team and reporting to the South West Emergency Services board on delivery. We would also look for you to liaise with the Avon and Somerset OPCC CFO who would be accountable for the funds to the Home Office.

- The term of the requirement would match the term of the project which is anticipated to be from commencement until end of March 2019. The profile of funds available would support a more full time approach for the first half year (assuming a prompt start in the next few weeks which is not guaranteed!) and a more part time role in the second year. Our feeling is that would be a good match with the likely requirement of senior liaison and team building on the initial phases and then moving more to oversight of delivery but happy to discuss this.

- Given your key role within Devon & Somerset Fire it may be appropriate for this to be subject to arrangements being put in place on an interim basis for leadership of Devon & Somerset Fire and to a 3 month recall notice period should Devon & Somerset Fire Authority determine that it was necessary in the interests of providing a Fire and Rescue service to the people of Devon & Somerset.

- In terms of the basis of the arrangement we assume that you would remain an employee of Devon and Somerset Fire Authority but assigned to work in partnership with Avon and Somerset Constabulary and we would exchange letters with the Authority to reimburse funds up to the agreed available amount in the bid but we are happy to talk this through.

- Given the wide ranging geography of the wider South West Emergency Services Collaboration role and the need to work across Avon & Somerset in relation to the Data Analytics project, we would anticipate that you would primarily be working from home and/or remotely supported by IT provided from this project. However you would also regularly visit Avon and Somerset Headquarters and other key partners' offices.

- Change Management support for the programme would be provided by Avon & Somerset Constabulary's Strategic Transformation team and appropriate resource would be provided from programme resources reporting to you as Senior Responsible Officer.

- From our discussion, I am aware that the Fire Authority are likely to insist on a full time assignment or secondment and for full cost recovery – likely to amount to c.£200,000 per annum – as a condition of agreement. Clearly it is difficult to reconcile this with the available funding envelope and profile in the bid. I attach the original bid and also the latest exchanges with the Police Transformation Team on clarification for your information. We discussed whether we could develop an arrangement whereby part of your role could be working with the SW Emergency Services

Collaboration and separately funded by that group which we would be happy to explore. Sue and Andy I know can see real advantages with having you involved in the programme but we also need to be able to make the terms work for effective delivery of the Programme and the bid funds and profile we have.

I hope this gives a helpful update – I will let you know how Monday's meeting goes and if we do get agreement from the Home Office I suggest we meet to explore further how we could make the arrangements work.

Yours sincerely

JOHN SMITH
Chief Executive Officer
for Avon & Somerset Police and Crime Commissioner

# Transformation Proposal Form

## Page 3: Secretarial Questions

Q1. What is the title of your proposed initiative?

Multi-Agency Integrated Services Analytics Hub

Q2. Which Police and Crime Commissioner is supporting this proposal? This should be the Commissioner who is signing this form.

PCC for Avon and Somerset Constabulary, Sue Mountstevens

Q3. Please provide the contact details for the nominated point of contact. The nominated point of contact will be our primary contact concerning the proposal and therefore should be able to speak authoritatively about the potential proposal, however, we may also wish to contact either or both Chief Finance Officers.

| | |
|---|---|
| **Name:** | Sean Price |
| **E-mail:** | Sean.Price@avonandsomerset.pnn.police.uk |
| **1st Phone Number:** | 07889659840 |
| **2nd Phone Number:** | 01275 816323 |

Q4. Lead Police and Crime Commissioner Chief Financial Officer Contact Information

| | |
|---|---|
| **Name:** | Mark Simmonds |
| **E-mail:** | Mark.Simmonds@avonandsomerset.pnn.police.uk |
| **Phone Number:** | 07802875096 |

Q5. Lead Force Chief Financial Officer contact information.

| | |
|---|---|
| **Name:** | Julian Kern |
| **E-mail:** | Julian.Kern@avonandsomerset.pnn.police.uk |
| **Phone Number:** | 07889 659422 |

Q6. Where relevant please identify the reference numbers and titles of all previous Police Innovation Fund and Police Transformation Fund applications and Expressions of Interest (EOIs) that relate to this proposal.

Avon and Somerset Constabulary (ASC) has previously submitted an Expression of Interest entitled "Integrating Policing into Healthcare Pathways, through the Connecting Care Partnership". The proposal that follows significantly builds upon the progress, systems and learning to support these ways of

working.

Please identify the primary reform strand to which your application pertains.

Digital Policing

## Page 4: Cooperation and Coordination

Q7. Which Police and Crime Commissioners, Chief Constables/forces or other non Home Office force are party to this proposal? Please detail which organisation/force is the lead for the proposal, and if relevant, with whom you will be working (including national bodies, other forces or industry).

• Avon and Somerset Constabulary is the lead force.
• Andy Marsh is the Chief Constable.
• Sue Mountstevens is the Police and Crime Commissioner.
• Governance is led through the South West Emergency Services Collaboration, with Lee Howell CFO for Devon and Somerset Fire and rescue service as Chair. See section 10 for list of partners.

Q8. Explain how your proposal supports and/or promotes closer and more coordinated working arrangements with other local services and wider law enforcement.

This proposal directly supports closer working between partners in order to identify and protect vulnerable people at the earliest opportunity; making communities safer and reducing partner agency demand and cost.

Its methodology is both innovative and transformative. Based on the collation of multi-agency data and the application of predictive analytics and visualisation; for the first time a joined up and collaborative view on vulnerability risk and early intervention opportunities becomes possible.
At its core is the development of a multi-agency integrated analytics hub working across service, agency and geographic boundaries to gather data and to provide, for the first time, a true and full picture of threat, harm and risk within our communities.

As well as supporting tasking processes to ensure that those most at need receive the help they require through early intervention and prevention, it offers significant opportunities to increase collective capability and capacity whilst driving reductions in demand and efficiency savings.
The overall approach is set out in the Figure 2 diagram uploaded on Question 14.

The transformation project will look to exploit and connect to existing collaborative data hubs where possible, such as Connecting Care. This is the hub-of-hubs concept. e.g. rather than connecting to each and every public health body, we connect to existing connecting care hub and use a single interface. This significantly reduces the level of effort required to build a golden nominal (ie the Master Data Management work).

By using an intelligence led and evidence based tool it will help inform an effective and efficient resourcing strategy. Reducing demand and having an intelligent picture will support the transformation and reform across wider public services by reducing the cost of the demand to potentially reinvest in upfront community projects.

Q9. What work has been done to reach out and coordinate with other Commissioners and forces who may have already delivered a similar proposal or who are considering a simliar proposal?

Following the dissemination of the EOI data, ASC were in touch with other Forces such as South Yorkshire Police and West Mercia Police, amongst others, to establish if there were collaboration opportunities. ASC recognise that our respective PTF bids clearly have some similar key themes around data analytics and integrated services.

Our discussions with the other forces revealed that we have all recognised the value of enhanced data sharing between public sector organisations, both in terms of cashable savings and improved outcomes for residents. We have identified data sharing as a key enabler of predictive analytics, risk stratification, intelligent commissioning and increased integration between local service providers.

All the forces we spoke to are following an Office of Data Analytics approach; a data sharing hub which is supported by a range of local public sector organisations. These hubs are pioneering initiatives and often based on New York's Mayor's Office of Data Analytics (MODA), which has been widely lauded as an exemplary case of how civic data can be used for maximum benefit. The broad concept is that these hubs will facilitate (and undertake) data sharing by uniting local services, driving cultural change and providing a technological platform which is API-enabled and supports the secure flow of information between organisations. Whilst there are likely to be minor differences between the projects, they will often include activities such as Information Governance support, Data Analytics and Benefits Realisation.

From our conversations, we concluded that going ahead, it would be useful to share progress updates, learnings and examples of best practice. As such, we propose a quarterly meeting between all forces who are (or are considering) developing a multi-agency data sharing hub. We suggest that the meetings could alternate between being held over a conference call and in person, so that forces can visit hubs across the country and get a first-hand insight into the work that is being undertaken. These meetings would drive collaboration between forces and ensure that useful learnings are shared effectively across the police service.

ASC already have a working data analytics model (including software) and are seen as a leader in this field. ASC wish to use its expertise to expand its proven concept to bring in more localised and regional partners such as local authorities and Fire brigades for example. At this stage, ASC would like to keep close links with similar projects and continue to consider potential opportunities, however; as for a joint bid in totality, given the nature of the vision around local partnership, collaboration outside the geographic operating parameters would hold limited value and could even complicate the bid.

However ASC would be particularly keen to collaborate with other forces and share best analytics practice around benefits realisation, learning lessons, data sharing and technical opportunities. This may lead to procurement benefits if the same technology is purchased on a greater scale.

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**Q10. Are there other bodies (e.g. private / third sector / public partnerships) with whom you are collaborating?**

ASC has been collaboratively exploring and demonstrating the potential for a multi-agency analytics hub working across service, agency and geographic boundaries over recent months. The Home Office has also been party and enabled strategic insight for the concept.

Below are a list of partner agencies that ASC will be collaborating with:

Police Forces:

• Devon and Cornwall Police (confirmed)
• Dorset Police (confirmed)
• Gloucestershire Police (confirmed)
• Northamptonshire Police (expressed an interest)

Fire and Rescue Services:

• Avon Fire and Rescue Service (confirmed)

- Devon and Somerset Fire and Rescue (confirmed )
- Cornwall Fire and Rescue (confirmed )

Local Authority:

- Bath & North East Somerset (confirmed in principle)
- Bristol City Council (confirmed)
- Mendip Council (confirmed)
- North Somerset Council (confirmed )
- South Gloucestershire Council (confirmed)
- Somerset County Council (confirmed )
- South Somerset District Council (confirmed )
- Devon, Somerset and Cornwall Department of Work and Pensions (confirmed)

NHS and Commissioning groups:

- South West Ambulance NHS Foundation Trust (confirmed)
- Bath & North East CCG (confirmed)
- University Hospitals Bristol NHS Foundation Trust (confirmed)
- Bristol CCG (confirmed)
- North Somerset CCG (confirmed)
- South Gloucestershire CCG(confirmed)
- Somerset Partnership NHS Foundation Trust (confirmed)
- TDBC WSDC (confirmed)
- Avon and Wiltshire Mental Health Partnership NHS Trust (confirmed)
- Yeovil District Hospital NHS Foundation Trust (confirmed)

Criminal Justice:

- BGSW Crime Rehabilitation Company (confirmed)

In broader terms, we will also seek to further collaborate and strengthen ties with the Connecting Care partnership in the areas of safeguarding and prevention.

We welcome interest and engagement from other police constabularies who share our strategic ambition in this area and may wish to partner with us in this process. We hope that this process will identify further opportunities and we anticipate that in any case the proposal will develop in an agile and iterative fashion.

Q11. Has your proposal been considered by any of the national structures which form part of the National Police Chiefs' Council or the Association of Police and Crime Commissioners or the boards supporting the five reform strands? Please provide details. The five reform strands are: Business Enablers, Digital, Local Policing, Specialist Capabilities and Workforce.

The enabling technology and Bristol 'blueprint' (outlined in the strategic case section) has been presented to a range of local partnership forums and national forums/stakeholders; for example:

- APCC and NPCC Summit 2016
- Avon and Somerset Chief Execs meeting
- Presented to HMIC - recognised as innovative within PEEL assessments e.g. managing demand
- Presented to CTO Home Office
- Presented to Mark Sedwill's regional Operational Meeting
- Presented to numerous local Council Cabinet meetings and partnership forums
- Enabling technology and approach published in Police Professional
- Bristol 'blueprint' commended at the MJ Awards for Delivering Better Outcomes
- Bristol 'blueprint' Hosted DCLG National Best Practice Open Day, attended by 44 other local authorities

• Bristol 'blueprint' is a finalist in the LGC Awards for innovation

The Bristol 'blueprint' has received widespread positive feedback from the listed stakeholders, and is established as best multi agency practice.

## Page 5: Strategic Case

Q12. Please provide a brief description of your proposal and its background. What problem does it solve or prevent? What opportunity does it exploit? What capability gap does it address?

Overview: This proposal is aimed at identifying and protecting vulnerable people at the earliest opportunity; making communities safer and reducing partner agency demand and cost. Its methodology is both innovative and transformative. Based on the collation of multi-agency data and the application of predictive analytics and visualisation; for the first time a joined up and collaborative view on vulnerability risk and early intervention opportunities becomes possible. At its core is the development of a multi-agency integrated analytics hub working across service, agency and geographic boundaries to gather data and to provide, for the first time, a true and full picture of threat, harm and risk within our communities. As well as supporting tasking processes to ensure that those most at need receive the help they require through early intervention and prevention, it offers significant opportunities to increase collective capability and capacity whilst driving reductions in demand and efficiency savings.

Background: The background to this proposal is a simple desire by all partners involved to address the historic problem of individual agencies and services having to rely upon the limited data available to them to make their own assessments of vulnerability – often not at the earliest intervention point. It embodies a shared commitment to learn the lessons from the tragic circumstances of those who have suffered, such as Victoria Climbié, through the lack of information-sharing between agencies. It builds directly on the best practice guidance around community safety which evidences that: "Information sharing is the cornerstone of delivering shared understanding of the issues and arriving at shared solutions … The right information enables partners to carry out evidence-based, targeted community safety interventions and to evaluate their impact. The improved outcome of an intelligence led, problem-solving approach to community safety can only be achieved when partners have access to relevant, robust and up-to-date information from a broad range of sources" (Home Office, 2007).

Problem to Address: Currently, no single person, service or agency has immediate access to the totality of the knowledge, intelligence and experience of partner agencies. This leads to the problem that risks and vulnerabilities may not be identified and those in need of help may go unsupported. This proposal focusses on addressing four constituent elements of this problem, namely:
• the lack of live (24/7) multi-agency data available to staff at the time of need
• the inability for live data to be searched according to personal requirement
• the inability to effectively predict vulnerability through a shared assessment of threat, harm and risk
• the limited ability to collectively manage demand spanning agencies and the additional costs of duplicate intervention

Prevention: This proposal seeks to prevent harm to individuals and communities, through identifying the issues that adversely affect vulnerability and to stop them, through an integrated multi-agency approach focused on early intervention, from happening. It builds on the successes of Local Strategic Partnerships and Multi-Area Agreements which are bringing about the strategic change towards problem solving, early intervention and 'upstream' activities that prevent harm and offending.

Opportunity: Rapid advances in computing power and data analytics give us an opportunity to convert big data into 'smart data'. This proposal seeks to exploit this opportunity through transforming our approach by applying advanced predictive analytics and visualisation functionality to make effective products available to staff. ASC have been seen as national leaders in this field.
The benefits of this ability to predict and visualise individual behaviour and risk through an integrated approach are myriad, such as:
• reduced vulnerability and harm

- safer communities
- reduced demand for services
- enhanced understanding by staff of the particular challenges within a locality
- better targeting of intervention services in partnership
- improved capability and capacity through shared approaches
- efficiency savings through reducing duplication of effort
- earlier intervention through focusing 'upstream'
- ability to establish a true 'one team' structure for risk identification and service delivery

Proposal: Figure 2 (Question 14 upload sheet) sets out the concept on which this proposal is based. To the left is the current process where each organisation relies primarily upon its own in-house data collection for live data. The two main components of this proposal are:

- Transformed data management and storage process through an integrated technical solution, and
- Innovative analytical products where staff from any agency have equal access to the totality of data presented visually for easy of understanding.

Building on Experience: This proposal builds on the experience of the innovative partnership (Bristol Blueprint) developed between Bristol City Council and ASC as part of the Troubled families programme and use of predictive analytics and visualisation. This involved development of a multi-agency record level database for 480,000 people spanning over 30 data sets encompassing: crime and ASB, domestic abuse, children in need, child protection, substance misuse, school attendance and homelessness. This provides the best understanding across our partnership for social issues facing families in the city. An independent evaluation of the Bristol Blueprint (conducted by the University of the West of England), demonstrated that for every £1 spent on the programme, an additional £1.33 of social value is created. Through efficiencies of scale, and better targeting of resources enabled by the analytics and visualisation tools, we would anticipate markedly improved SROI levels compared to Bristol alone.

Early Intervention: Predictive risk models for Child Sexual Exploitation have been operationalised and used to support the work carried out by early intervention teams. An integral part of our early intervention strategy is using the data available to identify those individuals who have emerging issues which put them at risk of needing crisis services in the future or eventually requiring intensive support. The early identification of such individuals or families, allows targeted services to proactively engage and, with their support, agree to work together to put in place strategies which prevent their needs from escalating. Evidence suggests that the earlier this takes place the greater the chance of changing that trajectory. This is crucial in not only improving their outcomes but also in reducing demand and therefore cost to public services.

Delivery: The collation of data, relating to a multitude of social issues, enables analysis to better understand the levels of risk, harm and vulnerability held by individuals. It also provides the basis of the predictive capabilities. Utilising the latest data modelling software the hub will be able to build advanced statistical models. The existing Insight Bristol team and ASC teams have developed a number of models using this approach, which are now informing the allocation of cases across the city and force area. This concept has proved to be highly effective in Bristol; it has driven the allocation of support to over a thousand families within the past year. By delivering a step-change in scale and automation, this blueprint will be operationalised across a number of partners force wide. This will give us the ability to make better use of data, removing geographic boundaries and deliver live reporting across the partnership. This can be used to respond to current need, predict future demand and plan services.

Products: The integrated services hub will deliver a range of products that will influence operational and strategic decision-making and empower all partner organisations to make more informed choices. These products (web based applications) will be crucial for understanding issues in all their complexity, measuring success, engaging partners, designing services, sustaining and driving service transformation, and making the case for continued investment.

Benefits: When complete, this work will bring about a new approach to managing risk and vulnerability which will, in turn, have an effect on the numbers accessing crisis services. There is a clear ambition to develop partnership working to improve efficiency and value for money and look at ways public services are delivered. ASC will continue to be a national leader, pioneering innovative work that improves the outcomes and life chances for the most vulnerable members of our society. This builds upon the recent

assessment by Her Majesty's Inspectorate of Constabulary who considered this approach to be 'Outstanding' (PEEL Report November 2016).

Scalability: This approach can be scaled up according to ambition. The concept of an integrated services data sharing hub has been proven to work in Bristol having delivered the various benefits outlined previously and therefore this proposal, whilst transformative in nature, is not simply speculative – it has been built and tested operationally and is working – albeit on a smaller scale to what the bid seeks to expand to and achieve. The Integrated Services Analytical Hub will focus on; troubled families; vulnerable adults; and vulnerable young people.

Return on Investment: The anticipated return on investment has the potential to be significant through reduced vulnerability and harm, safer communities, reduced demand, more effective and efficient services and reduced duplication of effort between services through joint tasking. Early intervention has demonstrated the impact that service providers can achieve, with our proposal aimed at transforming the way that risk, harm and vulnerability is identified in order to allow an even earlier intervention to maximise the effectiveness of all partners' actions.

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Q13. Please describe how your proposal delivers on the Home Secretary's criteria set out in her 7 February 2017 letter to Police and Crime Commissioners and Chief Constables and what contribution does it make to the delivery of the Policing Vision 2025? How does your proposal support transformational outcomes? Transformational change within policing is understood as a shift in the business culture of the service resulting from a fundamental change in the underlying strategy and processes that the police service has used in the past. Transformational change in policing is designed to be service-wide and enacted over a period of time.

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This proposal directly aligns with the approach set out so clearly by the Home Secretary. In particular it presents a new capability, a truly integrated multi-agency predictive analytics hub that draws on industry best practice to protect vulnerable people and reduce demand and cost. Through applying this leading edge technology, it will for the first time give all contributing service providers a true picture of vulnerability and demand through facilitating access to the totality of live data held by partners at the time of need. In doing so, it directly supports a shift, both strategically and operationally, from responding towards prevention through early intervention to all issues of crime, disorder and vulnerability.

This proposal demonstrably supports each of the reform workstrands within the National Policing Vision 2025 as it provides historic, current and predictive analysis of any area of business required, be it internal or external to an organisation. One of its greatest strengths is its ability to flex according to need and through sharing all data, the analytical products can then be user generated to ensure that the information meets user needs whether they lie within Local Policing, Specialist Capabilities, Workforce, Digital Policing or Enabling Business Delivery.

With regard to the specific outcomes, this proposal will deliver the following benefits in support:
1. Communities & Crime – for the first time, partners will be able to see the true picture of crime and vulnerability with their area. This knowledge can then drive localised tasking to enable proactive and preventative multi-agency interventions to protect citizens, support the vulnerable, and help build more cohesive communities
2. Countering Threats – an integrated services hub will provide the products required to allow the intelligent deployment of local resources and specialist capabilities in partnership with others in order to counter current and evolving threats to keep the public safe
3. Citizen Experience – through our approach, citizens will receive a consistently high quality service from whichever partners they approach or are engaged with; the integrated services hub will allow citizens to access seamless services that integrate both digital and traditional methods
4. Data & Analytics – our proposal is exactly what the Vision sets out and as such, its implementation will serve as a best practice model for other forces and regions to follow. Our approach is truly transformative, drawing on the best products within policing and industry which will capture, analyse and share data at speed across partners in order to improve joint decision making and service delivery
5. Technology & Digital – as above, our approach is transformational to exploit the opportunities of

developing technologies using core infrastructure, digital platforms and tooling to enhance internal and external partner experience and improve frontline services across the breadth of policing and justice activity

6. Enabling Services – through developing this proposal as a regional solution, it maximises opportunities to share workload and achieve economies of scale across forces and other partners

7. Integrated Delivery – integrated delivery lies at the heart of this proposal, with a vision of delivering integrated services across the partnership to improve our identification of and response to threat, harm, risk and vulnerability

8. Workforce & Culture – the use of analytical products can tailor information delivery to meet user needs, both for internal and external analysis; as such, our proposal allows the opportunity to provide a fuller understanding of workforce makeup to inform organisational approaches.

In summary, this proposal is aimed at protecting vulnerable people and making communities safer, both of which are core objectives for the Government as set out by the Home Secretary. Its methodology is both innovative and transformative, based on the collation of multi-agency data and, most uniquely, the application of predictive analytics and visualisation to maximise user effectiveness. At its core is the development of a multi-agency integrated analytics hub working across service, agency and geographic boundaries to gather data and to provide, for the first time, a true and full picture of threat, harm and risk within our communities. It has been developed from an initial pilot run locally in Bristol and in close collaboration with local partners. It represents best practice in business and policing and is scalable to meet regional or national requirements.

This proposal will also closely link into the Sustainability and Transformation plans of regional health care authorities. As their combined vision states 'sharing information securely and effectively, we will make a lasting contribution to the health, well  being and opportunity of our population.' A truly Multi Agency Integrated Analytics Hub has the potential, if implemented, to transform the integrated services landscape.

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**Q14. Please provide an overview of the planned work and intended outcomes. Your response should include an overview of your assumptions, options appraisal, the activities you will undertake, the outcomes and benefits in the short/medium/long term, delivery timescales and contingency options, your exit strategy, and how this proposal transitions to 'business-as-usual'. You may attach a two page document (Arial 11 font) to support your response (Max. 5MB upload, doc, docx, xls, xlsx).**

- File: Q.14 Upload.doc

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**Comments:**
Overview of Assumptions

• Partners are collectively not seeing the true risks and demands and are therefore missing opportunities to be more efficient, reduce costs and reduce harm
• Technology can be scaled across different organisations and manage a large number of siloed datasets
• Partners are at a mature enough state to consume and be informed by advanced analytics
• The Bristol blueprint can be replicated and scaled
• This is a unique proposal backed up with nationally leading foundation work in analytics.
• Partners will fully engage with data sharing agreements for the wider benefit of all agencies.
Options appraisal: The 'Analytics or Intelligence as a service' model we have chosen is an industry standard approach, but one that we do not believe has been successfully delivered across multiple agencies and siloed datasets within the public sector. The best way to maximise economies of scale in terms of both technology and resources is to deliver this service from a central team. Therefore, no other options are being presented as part of this bid.

Key Activities: Key activities that the project will undertake will focus across a number of workstreams:
• Governance: Establishing and agreeing governance structures across the partnership landscape and ensuring project management resource is committed from the outset.
• Technology: Identifying, sizing, procuring and implementing the supporting technology that will underpin the analytics hub.

• Resources: Establishing and recruiting new posts with the required skillsets to operate within the analytics hub. We will identify and close any training gaps within the central team.

• Data sharing: Building on existing partnership data sharing agreements, such as Connecting Care and identifying where new agreements need to be in place. Drawing on chief executive level steer and support to move to an actionable position as quickly as possible. This workstream will move in an agile way to ensure value is delivered in quick time.

• Product Development: We will establish an analytics product value assessment to support in prioritising development. Development will be agile and tailored to the agency or pan-agency 'pain points'. There will be fundamental user involvement from design to implementation of products to ensure apps and risk models are fully operationalised in to business processes.

• User Training: We will establish a training plan that will utilise a multi-channel approach across bulletins, cascade training, face-to-face briefings and online classroom based training.

• Communications: We will promote the integrated services analytics hub concept and highlight opportunities to all practitioners across the partnership landscape. We will also ensure that communication is two way by ensuring clear routes for any staff members to highlight ideas, innovative approaches or suggestions for existing or new products.

Technical Infrastructure: The deliverables of this project will be reliant upon technical infrastructure being in place. The below list provides a series of technical activities that will be undertaken to support delivery of products.

Overview: The technology required to build the Integrated Services Analytics Hub will build on the existing capability already in place at Avon and Somerset Police. This capability is appropriately scaled for the volume of data analytics currently being processed and will need to be scaled up to support the volumes of data proposed without impacting the existing operational ASC analytics. The proposed costings include the hardware/connectivity defined below, along with the resources to design, build and implement the hub. Moving beyond the period of the project , where we are utilising ASC systems as a host, we would consider and review the option to transition to a cloud provider in the full service (which could be an independent solution agnostic to current partners and technology – for example; Connecting Care use Orion Healthcare).

Storage: To support the new process of receiving files via FTP, loading into a database, entity matching, before final loading into the reporting database, an extensive amount of storage will be required. This storage will be split across many hosts, but will be provisioned via geographically distributed enterprise storage, and backed up with a secure off-site provider.

Connectivity: The existing capability is hosted in a secure data center and only accessible from the corporate network. In order to support the number of partners a number of changes will be required to give the level of capability required and to protect the existing service provided.
Additional resilient connectivity will be required to ensure the system will be able to provide the data and visualisations required to the partners. All communications will be over the public internet so additional bandwidth will need to be installed into the Avon & Somerset data centers, along with a number of partners where required.

Security: The system will be hosting substantial amounts of personally identifiable data so security will be of paramount importance. New firewalls will be required to deliver a new security zone to isolate the new connections, along with regular penetration testing and accreditation.

Server Upgrades: The existing Qlik and SPSS environments are designed to scale out to support any volumes required. The current environments will both require additional nodes to support the anticipated workload.

Visualisation, Modelling, MDM: All of the applications (SPSS, Qlik, MDM) used to deliver the Integrated Analytics Hub will require additional licenses to cover all the partner users. The MDM processes used to combine the disparate datasets from the providers will also need expert consultants from Entity to analyse the datasets and build/configure the MDM application.

Exit Strategy: ASC are a national leader in data analytics and already have predictive analytics models embedded in business as usual, which is producing significant benefits to operational demand and planning. This proposal will only enhance the existing capability by extending . ASC will not be looking to

exit from this proposal as we believe this to be the cornerstone of future policing and regional collaboration.

Delivery Timescales: Integrating multiple data sets from multiple agencies will bring about significant challenges which will require time and precision. As such, progress will be made in an Agile, iterative fashion, as is best practice in such projects. Within 12 months, the data sharing protocols, technology infrastructure and hub staff will be in place. It is expected that products could be produced before 12 months if the infrastructure allows. Within 12-18 months the hub will be making significant progress for enabling the outlined business benefits to be realised.
It is likely that further partner agencies will join this project in the medium term, however an on-boarding process will become part of business as usual.

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**Q15. Outline how delivery of your proposal will be project/programme managed, including oversight mechanisms and the staged gateways you intend to employ. You should provide details of: what your approach will be to implementing a framework that measures value for money, return on investment, the identification of benefits and benefits tracking (for example, making use of recognised programme methodologies such as Managing Successful Programmes)?**

Projects, programmes and significant change within ASC are managed and delivered using PRINCE 2 and MSP methodologies. All significant change, whether domestic or collaborative will begin with an approved Business Case, which will outline the proposed benefits and any identified returns on investment.

This project will be governed through the already established South West Emergency Services Collaboration Board. This governance group already contains some key regional stakeholders that are collaborating in this bid, such are regional Fire and Ambulance services.

The programme structure is loosely based on the model defined in the 'Managing Successful Programmes' methodology published by the Cabinet Office and the experience gained within the South West Police Collaboration Programme.

The approach for this bid will be to work with each agency closely to develop a suite of measurable benefits. Measures will be baselined prior to the project commencing and robustly measured over time. This will ensure the benefits identified are realised once the project is completed, ensuring value for money is achieved for all parties.
As part of the benefit monitoring process, cashable benefits are reported monthly into the Constabulary Management Board in addition to an adherence to a quarterly benefits reporting cycle. All such benefits are tracked and monitored within a Benefits Realisation Tracker by the Change Portfolio Office, which ensures projects remain on track to deliver identified benefits.
This specific change in partnership will focus on:
• Problem solving
• Early intervention
• Safeguarding
• Joint strategic planning opportunities
• Joint strategic and tactical tasking opportunities
• Joint organisational learning
• Cashable and non-cashable benefits

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**Please attach illustrative diagrams here. Please ensure diagrams are legible and that they have Arial 11 font.(Max. 2 word pages, 5MB, doc, docx)**

- File: Q15 Upload.doc

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**Q16. If your proposed initiative is at a force or cross-force level, please describe how you**

believe the proposal could be taken forward to a national scale.

This project will provide a complete 'blueprint' for; data sharing protocols; data sharing transfer; data entity matching; predictive modelling; visualisation; self-serve analytical products; integrated agency product development and early intervention approaches. The 'blueprint' could be quickly adapted and deployed at a number of scales across the regions.

At every stage of this project, should it be supported, we will be open and transparent and be happy to host interested agencies from across the national partnership landscape to help promote and embed this blueprint and share learning.

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**Q17. If your proposal impacts or addresses vulnerability, please explain how.**

This bid directly impacts and addresses vulnerability as it enhances police and partner's capabilities to identify and manage vulnerability. This bid will breakdown siloed datasets and deliver a much improved level of understanding around vulnerability. For example, bringing pan-agency data together against children, adults and locations i.e child care homes, would see a step change in how agencies see and respond to vulnerability in a way they cannot currently do.

As well as supporting tasking processes to ensure that those most at need receive the help they require through early intervention and prevention, it offers significant opportunities to increase collective capability and capacity whilst driving reductions in demand and efficiency savings.

## Page 6: Benefits and outcomes

**Q18. Please identify and quantify the benefits your proposal intends to achieve (over the short/medium and long term). When responding to this question, we request you use the benefits categorisation contained in the Benefits Guidance document which has been based on Home Office guidance. You may wish to upload a table with this information.**

- File: Q.18 Upload.docx

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Significant Potential Late Intervention Cost Reductions Late intervention refers to the acute, statutory and essential benefits and services that are required when children and young people experience significant difficulties in life, many of which might have been prevented. Spending on late intervention is an indicator of demand for acute services, such as hospitalisation and incarceration, which tend to be more expensive and deliver worse long term outcomes. It is estimated that the annual total cost of 'late intervention' across the Avon and Somerset area is approximately £428 million – spread across the police, NHS, Welfare, Local Authorities and Justice agencies. The outcomes from the integrated analytics hub would seek to deliver a reduction in 'late intervention' costs through better joint targeting of resources and more focused and effective early intervention. The Connecting Care programme in Bristol analysed the results of 1,100 families it worked with, where early intervention and a joined up approach was enabled by integrated analytics. Those 1,100 families saw the following results: • 40% reduction in ASB • 29% decrease in offending • 40% fewer Police call outs • 52% improved school attendance • 36% less alcohol dependency • 25% fall in domestic abuse The Allen family were one such family helped by the programme. The father was unemployed, illiterate and unable to engage with services. One child regularly went missing, had a 7.28% school attendance rate and engaged in sexual acts with older men for money. Another child was involved in ASB and was a regular drug user. Following the programmes intervention, the father is attending literacy courses and attending the Job Centre, both children are out of harm's way with 100% school attendance and no further drug issues along with no further crime and ASB. The above results are a snapshot of the impact of addressing the needs of just 1,100 families. There is the potential for significant demand reduction opportunities, across agencies, when this is scaled up accordingly to encompass all collaborating partners. The project would look to support in delivering a minimum of a 1% reduction in pan-agency 'late intervention' costs. This would equate to annual costs savings of £4.2 million pounds. In more detail, tables 1 and 2 attached outline the estimated late intervention costs by area and by agency along with the potential savings that would come from just a 1%

reduction in late intervention costs per annum. More informed Practitioners, Better Decisions, More Effective A key element of the bid will be to democratise analytical insight to managers and practitioners across the partnership. By making information more visual and accessible, practitioners will be:- • Better informed • Make better decisions • See a reduction time spent interpreting information • Allow staff and their teams to be more effective Based on the above benefits, ASC recently surveyed users who are now routinely interacting with predictive risk models and visualisation software (the same approach forms part of this bid). The results showed:- • 68% of users said they were now better informed within their business area • 56% of users said they were now making better decisions • 57% of users said using the products had saved them time • 58% of users said using the products had allowed them or their team to be more effective ASC will continue to build on the above results, but this provides insight in to the benefits that can be realised across the agencies involved as part of this bid. The attached Detailed Benefits Table summarises the anticipated benefits that this bid will deliver.

## Page 7: Financial Case

Q19. What are the totals costs to deliver the proposal? This should cover all projected expenditure on the project regardless of funding source and be profiled again against the total number of financial years for project delivery. Please provide the total resource and capital spending you intend to use profiled over the financial years for project delivery. Please detail the amount of Fund money you are seeking. To note: Resource spending is money that is spent on day-to-day resources (salaries and administration, etc.) Capital spending is money that is spent on investment. PTF funding ceases in the 2019/20 financial year. Please give your answer in full figures using the format 000,000. It would be helpful for you to provide any funding model spreadsheet you have used to develop the costs for your initiative. The figures you enter in this financial section should be drawn from that spreadsheet.

|  | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 |
|---|---|---|---|---|---|
| **Total capital expenditure** | 1,970,000 | 180,000 | 0 | 0 | 0 |
| **Total resource expenditure** | 550,000 | 550,000 | 0 | 0 | 0 |
| **Total expenditure** | 2,520,000 | 730,000 | 0 | 0 | 0 |
| **Sought PTF monies** | 2,470,000 | 680,000 | 0 | 0 | 0 |
| **Other funding** | 50,000 | 50,000 | 0 | 0 | 0 |
| **Total funding** | 2,520,000 | 730,000 | 0 | 0 | 0 |

Please upload your financial spreadsheet here. The spreadsheet must be in an xls or xlsx format.

- File: Q19. Upload.xlsx

Q20. Please provide all capital lines of expenditure for your proposal. If the table below does not contain sufficient rows then please create a copy of the table and upload with this form. The figures should be drawn from the spreadsheet requested in Question 19. Please give your answer in full figures using the format 000,000.

|  | Expenditure Item | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 |
|---|---|---|---|---|---|---|
| **Capital lines of** |  |  |  |  |  |  |

| | | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | |
|---|---|---|---|---|---|---|---|
| **expenditure** | | - | - | - | - | - | - |
| **1.** | Data Storage | 300,000 | 0 | 0 | 0 | 0 | |
| **2.** | Connectivity | 200,000 | 0 | 0 | 0 | 0 | |
| **3.** | Enhanced Security | 150,000 | 0 | 0 | 0 | 0 | |
| **4.** | Server Upgrades | 100,000 | 0 | 0 | 0 | 0 | |
| **5.** | Visualisation, modelling, MDM (incl 1 year annual maintenance) | 720,000 | 180,000 | 0 | 0 | 0 | |
| **6.** | Contracting Resource | 500,000 | 0 | 0 | 0 | 0 | |
| **7.** | - | - | - | - | - | - | - |
| **8.** | - | - | - | - | - | - | - |
| **9.** | - | - | - | - | - | - | - |
| **10.** | - | - | - | - | - | - | - |
| **Total capital expenditure** | - | 1,970,000 | 180,000 | 0 | 0 | 0 | |

If required, please upload your additional working here.

- File: Q.20 Upload.xlsx

Q21. Please provide all resource lines of expenditure for your proposal. If the table below does not contain sufficient rows then please create a copy of the table and upload with this form. The figures should be drawn from the spreadsheet requested in Question 19. Please give your answer in full figures using the format 000,000.

| | Expenditure item | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 |
|---|---|---|---|---|---|---|
| **Resource lines of expenditure** | - | - | - | - | - | - |
| **1.** | Analytics Hub Staff / Training | 500,000 | 500,000 | 0 | 0 | 0 |
| **2.** | Organisational Development | 50,000 | 50,000 | 0 | 0 | 0 |
| **3.** | - | - | - | - | - | - |
| **4.** | - | - | - | - | - | - |
| **5.** | - | - | - | - | - | - |
| **6.** | - | - | - | - | - | - |
| **7.** | - | - | - | - | - | - |
| **8.** | - | - | - | - | - | - |
| **9.** | - | - | - | - | - | - |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **10.** | - | - | - | - | - | - | - |
| **Total resource expenditure** | - | | 550,000 | 550,000 | 0 | 0 | 0 |

**If required, please upload your additional working here.**

- File: Q.21 Upload.xlsx

**Q22.** Please provide a spreadsheet that details how you arrived at the above figures (your modelling assumptions, including lines of capital and resource expenditure). Your spreadsheet should include: details of the forecasted costs to deliver the proposal, including how these costs are split between the PTF, forces, and other funding sources lines of capital and resource expenditure expected savings (Max. 5MB upload, xls, xlsx)

- File: Q.22 Upload.xlsx

**Q23.** Please explain how the proposal will be funded beyond the current fund cycle (ending 2019/20), if required.

This forward thinking analytics approach will identify a vast number of social problems upstream, which will enable agencies to put plans in place to address these. Multi agency efforts will tackle issues before they manifest into something more.

The series of efficiencies and improvements that will be made will translate into significant cashable and non-cashable benefits, as outlined in in question 24. This will ensure that this proposal is self-funding beyond the PTF cycle. As part of the project each individual agency will develop a series of bespoke business cases that will be governed through existing partner and SWESC channels. Partner agencies will not be mandated to join this service and will not be bound to remain in it if the business case does not present the expected benefits.

After the provided start-up funding has expired, each agency will provide a proportion of revenue funding required to continue the Multi-Agency Integrated Services Analytics Hub. This will be calculated as a proportion of the benefits realised during the two year funding period. Due to the number of partners involved, the return on investment should be high.

Going forwards, new partners on boarding the analytics hub will be required to pay a nominal subscription fee to cover proportionate overheads and licensing costs. However this cost will be demonstrably outweighed by the efficiencies that any new partners will gain.

**Q24.** Please provide all expected savings.Please give your answer in full figures using the format 000,000.

| | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 |
|---|---|---|---|---|---|
| **Cashable** | 0 | 700,000 | 1,400,000 | 2,400,000 | 3,000,000 |
| **Efficiency** | 0 | 300,000 | 600,000 | 800,000 | 1,200,000 |
| **Total expected savings** | 0 | 1,000,000 | 2,000,000 | 3,200,000 | 4,200,000 |

Q25. If relevant, please outline the procurement approach/strategy associated with the delivery of this proposal. What work has been done to demonstrate that your proposal is legally and commercially sound?

Qlik Visualisation Software

ASC can utilise a framework to run a further competition for the additional licensing e.g. Technology Products 2 Framework. A Framework is an umbrella agreement that has been through a compliant EU tender procedure meaning a contract award off it is also compliant. If the Framework has multiple suppliers on it then a further competition is necessary to allow all suppliers equal opportunity.

As our contract is with Specialist Computer Centres for the supply and maintenance of our current Qlik Sense licences, then there may be a case to procure additional licences directly from them under regulation 32(5)(b) of the Public Contract Regulations 2015 which is "for additional deliveries by the original supplier which are intended either as a partial replacement of supplies or installations or as the extension of existing supplies"

SPSS Modeler Software

ASC purchased our server version of this via SWO at preferential rates due to being an IBM majority owned company. This remains a valid route to market as long as the SWO contract remains in operation.

The national i2 "Access for All Agreement" that ASP contract for their i2 licensing from has been novated from the Home Office to the Police ICT Co. Police ICT Co advise that SPSS Modeler Premium is now included in this agreement and "This software is available for the community to download and deploy, without any impact to their committed spend."

For the purchase of hardware for this project, we would want to run a further competition against a multi-supplier framework. As there are many supplier and customers in the market for hardware, ASC would want leverage their position by stimulating competition. This is the preferred route to market in almost all occasions for hardware due to the disproportionate effort of evaluating a full EU tender.

## Page 8: Monitoring and Evaluation

Q26. Please indicate how the proposal will be evaluated including how you intend to track the realisation of outcomes and benefits. The Board wants to ensure that the wider police service can benefit from any learning and evaluation, and therefore in making a proposal you agree to share the outcomes of any evaluation.

The approach for this bid will be to work with each agency closely to develop a suite of measurable benefits (1st stages of the project timeline). Measures focused on harm reduction and demand/cost savings will be baselined prior to the project commencing and robustly measured over time. This will ensure the benefits identified are realised once the project is completed, ensuring value for money is achieved for all parties.

As part of the benefit monitoring process, benefits will be reported at the Constabulary Management Board and SWESC. All such benefits are tracked and monitored within a Benefits Realisation Tracker by the Constabulary Change Portfolio Office, which ensures projects remain on track to deliver identified benefits.

ASC have already partnered and invested with the University of West of England for a PHD student to evaluate the approach, deployment and impact of predictive analytics in policing. This role will be able to add evaluation value to this project.

The University of Leeds have expressed an interest in providing partnership in evaluating the approach. Leeds University Business School is a leading international business school in the top 1% globally, and

have been recognised as "University of the Year 2017" from the Times and Sunday Times, number 2 in the world for international business, and in the top ten in the UK for research.

We would be happy to be a reference site to share learning and the benefits of this project and to help shape national good practice.

## Q27. Please list the top three risks and the actions you will take to mitigate them.

Risk 1: Security of data

The combining and housing of numerous sets of sensitive partner data will bring an associated risk of data security.

ASC has considerable experience in data security at a regional collaboration level, which will mitigate this risk. ASC currently hold and manage data sets for numerous police partners as part of collaborative agreements. This bid will see ASC bringing partner data into a far more secure hosting environment. Due to the nature of Police data, ASC systems and servers are required to be of the highest standard of security.

ASC will ensure that partners who access the Integrated Analytics Hub will undergo compulsory data protection training and standardised data protocols will be a strict condition of license.
Having the correct legal framework to enable the sharing of sensitive personal data is absolutely vital to the success of an integrated services hub. The Insight Bristol team, working as part of the national Troubled Families programme, has already built the foundations for this work. This hub will extend into new areas and as such requires robust data sharing protocols.

The hub would include a range of data on social issues relating to individuals, families and households across the force. This existing data, held by public agencies, will be shared in response to statutory duties held in legislation placed upon local authorities, health partners and other relevant parties.

A detailed strategy will be produced as part of this programme of work; however the approach is briefly outlined here. All partners cited in this document will have signed Tier 1 Information Sharing Agreements (ISAs). These overarching documents declare intent to share, with specific use cases detailed in Tier 2 ISAs. The hub will utilise legal gateways (responsibilities placed on partners), to satisfy the conditions of the Data Protection Act. For example, the Crime and Disorder Act (1998) places a duty on a wide range of agencies "to do all they can to reasonably prevent crime and disorder in their area". Similar duties are expressed in the Children and Families Act (2014), Education Act (2002), Immigration and Asylum Act (1999), Local Government Act (2000), Localism Act (2011), Children Leaving Care Act (2000), Criminal Justice Act (2003) and the Welfare Reform Act (2012). A full Privacy Impact Assessment, along with supporting Privacy Notice, was conducted as part of the Bristol blueprint.

Data is merged to provide a single understanding of a person, family or household. This information is held in a secure database. It is correctly governed, auditable and meets the highest standards of security. Only trained, nominated, people have access to the data and associated visualisations. Any inaccuracies identified are rectified, any unnecessary information is removed and records are only kept for the purpose and duration of the programme.

Risk 2: Data Quality

There will be significant technical challenges when combing multiple sets of partner data. Projects that are focused around big data sets will undoubtedly uncover a multitude of data quality issues, even more so if this data is coming from a variety of sources and differing formats. The consequence of this risk manifesting is that partner agencies will not be able to overlay and combine their data, therefore leaving the project unworkable and benefits unrealised. As an example, the Connecting Care programme has found a lot of partner agency information is still being saved in a paper format, which will present quite a challenge.

As a leader in the data analytics field, ASC has the in house experience and technical capability to work through such issues and mitigate these risks accordingly. To mitigate this ASC will approach the

technical side of this project using an iterative Agile methodology. This will ensure that our technical team do not bite off more than they can chew.

Timescales for any new software development of this nature are difficult to predict beyond days and weeks due to the complexity involved and continual changing of user requirements and the technical landscape. To address this, Agile Scrum methodology is used to deliver iterative value that provides regular releases and embracing the changes that will be required as the product evolves. This provides project assurance by having working software in people's hands as early as possible, whilst lowering project risk compared to traditional waterfall approaches. This approach is industry best practice and has been an embedded way of working within ASC over the last 3.5 years.

Risk 3: Operationalising

A key risk in this project is that partner agencies will have an abundance of data at their fingertips but will not have the know-how, best practice knowledge or experience to get the best from it. Our partners are likely to need support to get the best from the analytics tools. Our aim is for our partners to change their ways of working to become far more efficient due to having a holistic view of demand data. As we have seen internally at ASC, working predictive analytics into BAU does not happen overnight, and work is needed to embed an innovative culture to ensure benefits are attained.

A series of measures will be put in place to ensure partner agencies receive sufficient support both internally and externally. ASC will recruit a Partner Relationship Manager to act as a conduit between ASC and partner agencies. This will allow for a constant line of communication to share best practices. An internal change champion in each agency will be identified to drive change and innovation. System usage monitoring will be able to act as a catalyst for change and direction of where needs improving.

ASC will use in house expertise to actively identify demand pinch points for partners, thereby highlighting where processes, systems and people could better be used. Initial training and refresher training will also be offered throughout the life cycle of this project, which will help the key aim to drive down demand for partners where possible.

In addition to these measures, a performance governance framework will be established for all partner agencies to sign up to.

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## Q28. How will risks be identified, monitored and addressed during the project?

Risk Assessment is a systematic method of looking at work activities, considering what could go wrong, and deciding on suitable control measures to prevent loss, damage or injury. The Assessment will include the controls required to eliminate, reduce or minimise the risks.

We will ensure there are processes are in place to ensure that risks are identified as quickly as possible, but it is important to remember that risks can be identified by anyone at any time. An initial risk assessment will be conducted, with partner agencies at the beginning of the project.

We will follow the process outlined below:
1. Complete the risk matrix to score the level of the risk
2. Complete Risk Management Plan to mitigate and reduce the risk where possible
3. Act appropriately to the level of risk identified
4. Monitor the risk

Risk management plans will cover:
• Circumstance/risk identified
• How risk was identified
• Impact of risk (and to whom)
• Warning signs / triggers
• Current control measures -What has been done to manage this risk
• Probability of risk occurring – level of risk
• Any further control required
• Next steps

All identified risks will be recorded on a project 'Risk register' that will be regularly reviewed, updated and monitored by the partner agencies.

## Page 9: Upload signatures

Q29. Please upload a signed copy of this signature page.

- File: Signature Page.pdf

## Page 10: Comments

Q30. Please let us know if you have any feedback on your experience of the EOI/proposal process.

Avon and Somerset Constabulary will always welcome the opportunity to apply to benefit from the Police Transformational Fund.

We believe we are an innovative organisation and opportunities such as the police transformation bid process allows us and our partners to realise our integrated working vision.

We are fully supportive of the EOI/Proposal process.

Sent by email to: Sean.Price@avonandsomerset.pnn.police.uk,
Mark.Simmonds@avonandsomerset.pnn.police.uk, Julian.Kern@avonandsomerset.pnn.police.uk,
JohnR.Smith@avonandsomerset.police.uk

19 September 2017

Dear Sean, Mark, Julian and John,

**PR063-2017 – Multi-Agency Integrated Services Analytics Hub**

Further to correspondence of 21 June 2017, advising of the Police Reform and Transformation Board (the Board)'s request that Chaucer review your proposal addressing aspects of data and analytics (attached at Annex A), we are writing to update you on the Board's recommendations following the completion of this review.

Chaucer's recommendations, together with those of the Gateway Group, were tabled at the Board on 14 September 2017. We are pleased to let you know that the Board has recommended your proposal for a total of £3,150,000 from the Police Transformation Fund; £2,470,000 in 2017-18, and £680,000 in 2018-19.

Given the quantum of funding that is sought, the Home Secretary may require that funding is released in a tranched manner, with a staged release of funds given once agreed milestones and reporting requirements have been met.

Prior to being reviewed by the Home Secretary, your proposal will now be considered by a Home Office Validation Panel, scheduled for Monday 2 October 2017. To facilitate this process and aid the Home Secretary's decision-making, the Home Office also requests that you provide the following information:

- assurance that this project can be delivered within its current funding profile between financial years

- how as a pathfinder for local data sharing – the project will work with other areas developing these solutions and have the robust evaluative base to allow for scaling of results

- A description (plan with timescales) of how you will:

    o develop a revised benefits plan

    o develop a detailed delivery plan

    o scope the "hub" concept more fully to ensure scale

    o engage NLEDP as future interrogator

    o engage DII regarding local operating model

    o engage Mercury, HODAC, and NCA to leverage approaches.

To meet the timescales of the Home Office's validation procedure the Home Office are asking that provide the information that responds to all bullet points outlined above by no later than noon, Friday 22 September 2017.  We request that this information is sent to the Home Office Law Enforcement Transformation Unit (Police.TransformationFund@homeoffice.gsi.gov.uk), copying in the Police Reform Support Team at applications@apccs.police.uk

We appreciate that the turn round time for the information may prove difficult to deliver in the requested timescales.  Please let us know if this is the case so we can work with Home Office colleagues and yourselves to agree how best to take the validation work forward.
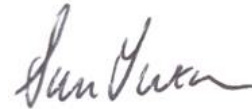
Should you require further clarification of the Board's recommendation, we request that you contact Jacky Courtney (07980 725522) or Jane Carey (07712 411603) in the Police Reform Support Team (APCC/NPCC).  If you need clarification on the requirements outlined by the Home Office; the Law Enforcement and Transformation Unit has asked that they are contacted at Police.TransformationFund@homeoffice.gsi.gov.uk

On a final note, we would like to acknowledge your collaborative approach to working with Chaucer during their review. The Board welcomes the greater coordination that has been achieved through this joint working and collaboration.

Yours sincerely,

Paddy Tipping
**Chair, Police Reform and Transformation Board**
**Police and Crime Commissioner for Nottinghamshire**

Sara Thornton
**Chief Constable**
**Chair, National Police Chiefs'**
**Council**

Sent by email to: m.kenyon@west-midlands.pnn.police.uk, n.chamberlain@west-midlands.pnn.police.uk, Elizabeth.hall@westmercia.pnn.police.uk, heather.costello@westmercia.pnn.police.uk, john.bates@humberside.pnn.police.uk, philip.goatley@humberside.pnn.police.uk, Mark.Simmonds@avonandsomerset.pnn.police.uk, Julian.Kern@avonandsomerset.pnn.police.uk, charles.garbett@essex.pnn.police.uk, debbie.martin@essex.pnn.police.uk, Jayne.woods@dyfed-powys.pnn.police.uk, Edwin.harries@dyfed-powys.pnn.police.uk

21 June 2017

Dear Colleagues

- **PR041-2017 - UK Law Enforcement National Analytics Solution (NAS): Foundation Phase (Transition State 1)**

- **PR053-2017 – Worcestershire Office of Data and Analytics (WODA)**

- **PR061-2017 – Humber Office of Data Analytics**

- **PR063-2017 – Multi-Agency Integrated Services Analytics Hub**

- **PR075-2017 – Essex Centre for Data Analytics: A whole system approach for integrating data and predicting risk**

- **PR108-2017 – Transforming Police operational performance through the use of advanced analytics in command and control**

We wrote to you on 20 April 2017 to explain the consequences of the General Election on the consideration of the proposals to make use of the Police Transformation Fund (the Fund). You will have noted that the Police Reform and Transformation Board (the Board) indicated it would use its best endeavours to progress matters to enable consideration of the Board's recommendations by Ministers as soon as is practicable.

To this end, the above proposals were reviewed by the Board at its meeting of 25 May 2017. The Board noted that all six proposals covered aspects of data analytics. As such, the Board has recommended adopting a nationally commissioned approach to data and analytics proposals under the Digital Intelligence and Investigations (DII) programme.  For your ease of reference we have also sent you a copy of all of the above proposals.

To take this recommendation forward, the Board has asked that all six proposals are reviewed to determine how they complement each other and the existing programme of DII activity.  The details of who will be conducting this review are yet to be finalised but we will contact you as soon as the necessary arrangements have been made.  This work will be undertaken prior to recommending individual funding decisions for each of these programmes but we intend to agree a potential funding envelope with the Home Office for the totality of any work programme.

If you have any questions, please contact the APCC on 0207 222 4296.


Yours sincerely,

Julia Mulligan
**Chair, Police Reform and Transformation Board**

**Police and Crime Commissioner for North Yorkshire**

| Transformation Bid Response | | | |
|---|---|---|---|
| Chief Officer Sponsor: | Nikki Watson (ACC) | Business Lead: | Sean Price |
| Author: | Sean Price Mark Simmonds (PCC CFO) | Date of Report: | 22nd September 2017 |

This document provides the additional information requested by the Home Office from a letter received by the Constabulary on 19th September. The information presented is structured with the bullet points outlined in the letter:

**PR063-2017 – Multi-Agency Integrated Services Analytics Hub – Additional Information:**

1. **Assurance that this project can be delivered within its current funding profile between financial years.**

   ➢ The delay in the bid decision making process and hence delay to the start of the work has been assessed. We can confirm that the project can still be delivered over the two year period of 2017/18 and 2018/19 and that there will be no delay to delivering benefits.

   Due to the 5-6 month delay, work will now commence in October/November 2017. This will delay the process of final technical design and approval across a wide partner group. It is now higher risk to maintain the funding profile between the two years as set out in the bid. The technical design phase is complex and critical to the success of the project and requires the approval of all partners involved.

   We are therefore recommending and requesting the following commensurate changes to the financial profile over the two years:

   **Funding re-profile**

   1. Resource lines of expenditure (Q21 of the bid)

   The Analytics Hub staff and training and organisations development work will now all be in 2018/19 as the solution will not be operational until Spring/Summer 2018.

   *Re-profile 1 – Resource expenditure*

   *We are requesting to move £500,000 of Analytics hub staff/training and £50,000 of organisational development from 2017/18 to 2018/19 for the reasons set out above.*

   After this change, Resource expenditure in 2017/18 will be zero and will be £1,100,000 in 2018/19.

   2. Capital lines of expenditure (Q20 of the bid)

   The design work and partner approval has been delayed by 5-6 months. We had expected to complete technical design and approval by January 2018 in order to procure capital assets before the end of year one in March 2018. This now appears very challenging to achieve.

   The contracting resource of £500,000 set out in the capital expenditure lines in our bid will focus on the solution design and approval with partners. This is a key aspect of the work and we will seek to complete this by March 2018.

   *Re-profile 2 – Capital expenditure*

   *As a consequence of the delay starting, we consider it very challenging to have a detailed design approved by all partners and competitively procured by March 2018. We are requesting a move of all the capital asset expenditure from year one to year two of the project.*

   If this change was agreed, Capital expenditure would be £500,000 in year one (being the contracting resource to complete the detailed design work and partner sign off) and the capital expenditure in year two would be £1,650,000.

This re-profiling would allow a *gateway review* point at the end of year one, whereby a viable detailed solution design is signed-off with all partners and ready for capital procurement early in year two.

**If this re-profile between years is not possible**

Capital spend

If a re-profile of the funding as suggested above is not possible then we will seek to maintain the original capital profile of spend set out in the bid. This will require a fast-track of the design and approval and procurement process between October 2017 and February 2018 (which is set out in more detail in the section below) and will incur a higher degree of design risk and would consider fewer design options. To achieve this, the team would restrict the design options and focus on an extension of the infrastructure already existing at ASC

Resource spend

Due to the delay in starting the work, it is not reasonable to retain the same resource expenditure profile as this spend is based on days worked and we have missed 5-6 months elapsed work time.

We would therefore strongly request the resource lines of expenditure to be re-profiled as above as we cannot catch up the elapsed time due to the delay in staring the work.

➢ **Benefits**

The benefits outlined in the bid will not be affected by the revised timescales and budget adjustment outlined above

**Actions to mitigate the delay**

➢ A&S Strategic Procurement Services will leverage existing frameworks and significant experience to fulfil project requirements and timelines

➢ A chief executive partnership board is already established that will oversee an accelerated project initiation phase (given we are now halfway through 2017/18 already). A detailed plan will be presented to this board on 2 October 2017 for endorsement and governance.

➢ The established South West Emergency Services Board will provide tactical governance for delivering the project plan and benefits realisation over the course of the project.

➢ There is an established multi-agency collaboration (working on behalf of the chief exec board) led by a Chief Officer that has already commenced work on the project; assisting in prioritising and developing multi-agency use cases, along with providing inter-agency single points of contact and liaison.

➢ A newly created Strategy and Transformation Department will support and apply proven change management and project governance practices on behalf of the project.

➢ Project resources are allocated from a central Strategy & Transformation Team and change activity is managed consistently in line with PRINCE2 and Managing Successful Programmes methodology.

➢ A chief officer lead has already been identified (Chief Fire Officer Lee Howell from Devon and Somerset Fire Service) who will provide executive leadership.

2. **How as a pathfinder for local data sharing – the project will work with other areas developing these solutions and have the robust evaluative base to allow for scaling of results**

   ➢ We will establish a collaborative network across the other successful bids. A collaborative space online will be created to share learning, good practice, progress and risks.

   ➢ We will establish close working with the College of Policing and other bodies to maximise learning opportunities and good practice.

   ➢ We will leverage our already strong academic links to form the basis for independent and robust evaluation. We will confirm university roles and responsibilities within the detailed plan.

   ➢ We will develop products and solutions using the agile methodology ensuring iterative user feedback and continuous delivery of value.

   ➢ The Avon and Somerset Chief Constable's international policing portfolio will further provide important mechanisms for learning and evaluation.

   ➢ All existing top level data sharing agreements with our partners and specific level 2 agreements for specific use cases will be reviewed, refreshed and created where appropriate

   ➢ The Information Commissioners office/NPCC will be invited to be integral with the project. This will provide assurance around data sharing practices (current and GDPR/PD) and help provide a national blueprint.

3. **A description (plan with timescales) of how you will:**

   **3.1. Develop a revised benefits plan**

   **3.2. Develop a detailed delivery plan**

   **3.3. Scope the "hub" concept more fully to ensure scale**

October 2017:

   ➢ SRO is already appointed and will mobilise the project team and complete a rapid build of a detailed delivery and benefits plan immediately following the Validation Panels decision – working through the established governance channels noted in previous sections.

   ➢ As stated earlier in this document, the benefits outlined in the bid will not be affected by the compressed timescales and slight budget adjustment outlined

   ➢ The South West Emergency Services Board will sign off and commence governance of the project decision making and delivery

   ➢ A dedicated Enterprise Architect (ASC resource) will lead a small team of experts to coordinate and design a scalable supporting infrastructure. The high level design and approach will be detailed within the draft detailed plan that will go to the Chief Executives meeting on 2nd October 2017.

   ➢ Specialist IT resources will be sourced as required and then support with the design and planning phase.

   ➢ Close liaison with the other successful bids will be implemented, along with any similar or related smaller scale hubs (both nationally and internationally).

   ➢ The information sharing blueprint will be implemented working closely with the Information Commissioners Office and NPCC

November 2017:

> A rapid build of specific use cases will be signed off by the South West Emergency Services Board. As part of this, products will be prioritised focusing on the biggest value quick wins

> The detailed plan will go live initially focusing on project governance and recruitment of staff and contracting resources as required.


November 2017 to Feb /March 2018:

- Where possible use will be made of the data sharing protocols already operating between Police and local partners in Bristol.

- Detailed design of the technical infrastructure solution options, sizing of storage and server capacity required, security infrastructure and connectivity requirements between partners and ASC hub

- Data sharing protocols will be designed and agreed with partners

- Assessment of the infrastructure design and hosting options.

An extension of the existing ASC infrastructure was proposed in the bid and remains the fastest option for implementation. Ideally, other options should be considered to ensure value for money and future scalability including: Cloud services; hosting 3rd party partner; hosted at another partner to the bid)

- Assessment of the application licencing requirements, number of users and final licensing proposal issued to SRO for approval with all partners.

- Final draft solution design issued to SRO for agreement with individual partner leads and their technical leads. Agreement sought and obtained


Feb 2018/ March 2018:

Final technically validated detailed design approved at The South West Emergency Services Board


March 2018 or April 2018

A&S Strategic Procurement Services will commence procurement for all key expenditure in line with the approved design.

Timing will depend on whether the capital asset spend can be re-profiled and which approach is taken to design (look at various hosting options or only look at extending ASC infrastructure).


### 3.4. Engage NLEDP as future interrogator

### 3.5. Engage DII regarding local operating model

### 3.6. Engage Mercury, HODAC, and NCA to leverage approaches

> As part of the design phase of the supporting IT infrastructure and data sharing blueprint – we will immediately identify SPOCs from each of the programmes and engage with:

  o The National Law Enforcement Data Programme (NLEDP) to ensure our approach is commensurate with the future NLEDP vision. The potential of the National Law Enforcement Data Services (NLEDS) is significant and will be reflected within our design for mutual benefit.

  o Digital Investigation and Intelligence (DII) to ensure that the project supports increasing requirement for policing digitally. We will look to establish joint learning.

  o Mercury - to ensure that the project best supports where appropriate (mutual aid etc).

- HODAC - We have already been working closely with HODAC and will build the project in with our existing relationship.
- NCA to ensure that the project best supports mutual opportunities where appropriate

**The above provides a brief response to those matters raised in the Home Office correspondence. If further detail is required please do not hesitate to contact us.**