

OFFICIAL

Social & Behavioural Sciences

Requirements of the National Crime Agency

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Executive Summary

- I. This research project seeks to understand the context, the applications and the requirements in the area of Social and Behavioural Sciences (SBS) among relevant National Crime Agency (NCA) units and teams. It has included a review of internal NCA documents and has also gathered external view-on the topic.
- II. For the purposes of this work we define *Social and Behavioural Sciences* (SBS) as theories and models that deal with relationships, interactions, communications, networks, associations and relational strategies or dynamics between cognitive entities (individuals or networks) in a social system.
- III. A first requirement, shared by both **pre-crime** (disruption & prevention) and **post-crime** (pursue & reaction) teams, is the use of SBS to **influence & persuade and to predict & anticipate**. Direct and indirect communication techniques are an important component in the NCA's work with both offenders and victims; these techniques can be enhanced through access to SBS expertise, and can be applied to:
- a. interviewing processes;
 - b. the detection of truthfulness/deception, to establish credibility;
 - c. attempts to influence and persuade (for either awareness-raising or disruption).
- Clearly, differences between online and offline worlds might shape needs and outcomes.
- IV. A second requirement is for research into **criminal roles and motivations**. This requirement applies primarily to units dealing with organised crime. The

assumption that organised crime is motivated by profit seems no longer satisfactory. A more structured scrutiny of offenders, inside and outside prison, is likely to uncover different triggers and roles. Insight into motivation is also a key element in designing influence to change behaviour.

- V.** The third requirement aims for a better understanding of **criminal networks and group dynamics**. This calls for a more focused study of the characteristics of criminal groups, based on the interactions of members revealed through social networks analysis and business models. This requirement is primarily aimed at improving success rates in the disruption of groups through enhanced understanding of how they function..
- VI. Cultural Studies.** There is a need to understand how different cultures and social values influence the way that both offenders and victims think about (and engage with) Law Enforcement Agencies. This will help the NCA improve impact, by managing how it is perceived (not least in cyber-space).
- VII.** A fifth set of requirements relates to the use of data to aid **mapping and interpretation of crime trends**. Concept mapping techniques can ‘make data talk’ differently to understand synergies, and to provide a better understanding of the criminal world in its social context. This understanding assists designing effective disruption of criminal methodologies.
- VIII.** A final set of requirements relates to **measurements of success** and innovation in using SBS. The NCA Delivery Dashboard published in April 2014 enquires about the effectiveness of measures of non-traditional methods for disruption across the agency. In this context there is a requirement for the NCA to invest in SBS-led innovations, when they are **evidence-based** and offer **cost-effective** solutions and alternatives.

- IX.** In addition to the NCA units and their requirements, views, reports and documents have been collected from the College of Policing, the Home Office, the Foreign and Commonwealth Office, the UK Cabinet Office Behavioural Insight Team, the European Commission Joint Research Centre and Europol, and briefly included in this project. The views of **external partners** have generally complemented the NCA's requirements in welcoming insights from SBS for what concerns motivations of (organised) criminals, intelligence enhancement and the addition of a human dimension to risk management processes.
- X.** The last section of this report considers some of the many approaches, within the **vast realm of SBS** that can be considered relevant to address the requirements shared by the units within the NCA participating to this study. SBS can offer new research ideas to consider when looking for new ways to approach, police and disrupt serious and organised crime. Suggestions for further research are presented for each requirement: these range from behavioural economics to ethnographic methods of research in sociology and criminology, from social media analysis to social constructionist theories.
- XI.** In conclusion, there is strong evidence that an innovative approach to the use of research – through partnership between academia and law enforcement – can strengthen the role of SBS in the fight against serious and organised crime.

Introduction

1. This report was commissioned by the External Champion of the UK Research Councils' Global Uncertainties Programme, as a contribution to the Programme's Transnational Organised Crime strand. It draws on research undertaken in the course of a three month secondment to the National Crime Agency (NCA), with the aim of understanding the contribution that Social and Behavioural Sciences (SBS) could make to the NCA.
2. SBS encompasses a vast field of enquiry. For the purposes of this investigation, the subject has been defined in line with established practice within the NCA itself¹, as follows:

Behavioural Sciences support the investigation of decision processes and communication strategies within and among individuals. Behavioural sciences involve studies of psychology, neuroscience, behavioural economics, anthropology, sociology and criminology and media studies among others.

Social Sciences enable the study of processes within social systems through evaluations of the impacts that social organisations and social events have on groups and individuals. This includes, amongst other things, sociology, criminology, anthropology, political science and economics.

Social and Behavioural Sciences (SBS) therefore, deal with relationships, interactions, communications, networks, associations and relational strategies or dynamics between cognitive entities (individuals or networks) in a social system.

¹ See *Behavioural Science for the NCA*, The Behavioural Science Team in Organised Crime Command, published 1st of April 2014

3. This research project was also shaped by the following key research questions, agreed with NCA management in advance:

- | |
|--|
| 1) What is the attitude towards SBS across the NCA? |
| 2) What is the understanding of what SBS can add to current practices to fight serious and organised crime across the NCA? |
| 3) What are the requirements across the units of the NCA in relation to SBS in line with the NCA mission and values? |

4. It is important to acknowledge the context within which this study was undertaken. The NCA is a new agency with a new mission and strategic plans: it was established in October 2013, six months before this research began. Furthermore, it developed from a precursor organisation - the Serious Organised Crime Agency (SOCA) – which left a legacy of practices and approaches to be used or discarded by the NCA. The ongoing construction of the new identity of the NCA – with a Transformation Programme launched for the occasion - has been considered at all times during this research project.

5. This legacy includes a number of attitudes or beliefs that inevitably constrain the contribution that SBS could make. For instance, a) there is a general perception that SBS can only contribute to rare or occasional cases, as a last resort tactic; and b) it is most applicable in the “prevent” sphere, to disrupt organised crime, rather than in the “pursue” sphere that dominates the NCA’s work. In fact, NCA practitioners working on operations against *serious* crime are well-versed in the use of SBS to support their investigations.

6. Given the pace of change being experienced by the newly-created NCA, it can be expected that the requirements identified by this research will evolve

in the short- to medium-term. But we hope the outcome of this research will not only provide a helpful “snapshot” of current requirements, but lay the foundations for future studies.

DISCLAIMER: The language and terminology used in this report does not match NCA corporate language and terminology. The purpose of this project is to convey NCA requirements in a clear and immediately digestible way for external partners.

Notes on Methods

7. The project lasted three months, based with the Behavioural Science Team at the NCA in London. During the first month, a semi-structured interview plan (**Appendix A**) has been drafted and approved in order to satisfy the research needs and answer the research questions and expand the research area adequately. Documents were collected and analysed in order to provide perspective to data from the interviews (which took place mainly in the second month). Time was then spent developing the analysis, producing a preliminary draft that was circulated to stakeholders for comment.
8. The **semi-structured in-depth interview** plan was tailored to suit contributions from a number of different units and expertise within the agency. We focused our attention on: a) those units or experts that overtly use SBS (as identified through preliminary document analysis); and b) those units or experts that – with or without explicitly applying SBS techniques or insights - are more likely to deal with human behaviour assessments (re victims or offenders). The response rate was generally high, with a total of 20 units/experts contacted (by email, through the NCA intranet), of which 16 replied: 2 were unable to participate due to time constraints and 14 arranged interviews. The following table lists the 14 units/experts who successfully participated in the interviews. It is not deemed necessary to name specific experts.

Intelligence Hub Horizon Scanning
Behavioural Investigative Advice
UK Human Trafficking Centre
National Cyber Crime Unit
National Vulnerable Witness Advisor

Anti-Kidnap and Extortion Unit
Behavioural Science Team
Centurion Prison Team
Lifetime Management Team
Vulnerable Persons Team
UK Missing Persons Bureau
Threat Reduction (Education and Influence) Unit (Economic Crime Command)
Personnel Security, Standards and Security Department
Innovation and Knowledge Management Unit (CEOP Command)

9. Document analysis has included NCA reports and files, as shared on the intranet - for both the units interviewed and those not participating in the interview process. Document analysis has also extended to best practices and guidelines as published by law enforcement or policy-makers outside the NCA. For purposes of completion, official documents, and where possible additional interviews (4 in total), have been conducted from the College of Policing, the Home Office (Strategic Centre for Organised Crime, Cyber Policy Team), the Foreign and Commonwealth Office, the UK Cabinet Office Behavioural Insight Team, the European Commission Joint Research Centre and Europol, in order to have a more complete picture of other relevant drives in this field of research.

10. Finally, data was analysed through a thematic coding. Thematic analysis allows the generalisation of the findings to identify the requirements on a more conceptual and synergic basis. An analysis, which includes views of 14 experts (in an agency with over 4,000 employees), arguably has its **limitations** in the low number of people involved in the study. However, the interview sample must be considered **representative** and **purposeful** for this project. Many core areas of the agency have not been approached – in particular

those more involved in pursuing organised criminals in the most traditional sense. The units involved in the study were those who might have a more consolidated interest in the use of SBS. The findings, as presented below, include both data from the interviews and the analysis of documents published by other units and teams within the agency. In conclusion, therefore, **opinions** from the interviewees are combined also with **interpretations** of the author gathered from the texts, in line with principles and aims of **qualitative methods** of research.

Requirements for SBS across the NCA

A. Communication: Influence & Persuade, Predict & Anticipate

11. Every team expressed the need to re-shape communication techniques to deal with crime in their daily work. This appears to be a priority throughout the organisation: for teams working on both serious and organised crime; for those focused on prevention & disruption, and for those engaged in reactive operations and law enforcement support. Help and insight is needed to support direct and indirect communications, in terms of:

- **use of language** (spoken, unspoken, written, bodily, etc)
- **actions** (to take when approaching victims or offenders)
- **goals** (to pursue when dealing with different targets and in different scenarios).

12. The NCA see benefit in enhancing the communication with potential or actual offenders before a(nother) crime has been committed. Currently there is a diverse range of interventions for dealing with the vulnerabilities and psychological needs of victims even in absence of criminal activity, whereas the communication with offenders tends to exist after the commission of criminal acts².

² Exception to this is the Behavioural Science Team who routinely applies influence to offenders and victims' behaviours, dependent on the nature of its tasking.

- 13. Post-crime teams**³ that work closely with law enforcement have developed a strong expertise in communicating with victims, with offenders or with police forces dealing with incidents or criminal acts (depending on the specialism). Their SBS requirements are linked to ways to combine **fragmented knowledge** as well as to better handle **current practices**. In some cases, as discussed by the Anti-Kidnap & Extortion and the Behavioural Science teams, current practices might be based on **conventional methods** that have not been fully tested or compared to other methods for best practice.
- 14.** For example, as noted by the Vulnerable Persons Team, if victims do not go through the criminal justice system, they are not interviewed. However, the unit feels this could happen for purposes of intelligence-gathering, in order to assess their characteristics and predict/support behaviour of other victims in similar positions. The fact that this currently does not happen is a problem in terms of achieving a comprehensive picture of criminal phenomena.
- 15.** SBS can also help law enforcement officers to *persuade* hostages or/and victims to collaborate, ensuring the best outcome from their testimony. There are obviously risks to be managed, here, as highlighted by the Anti-Kidnap and Extortion Team: for instance, hostages might prefer not to testify (a decision that has to be respected). Some units have also mentioned the role of memory-enhancing techniques, based on cognition. These practices are, indeed, useful in **influencing through actions** rather than just words.

³ Especially Anti-Kidnap and Extortion, Vulnerable Persons, Vulnerable Witnesses, Behavioural Investigation Analysis, certain functions of the National Cyber Crime Centre, the Human Trafficking Centre, and the Centurion Prison Team

- 16.** There is also interest in understanding and deploying methods and measures to detect **truthfulness and deception** (both with victims and with offenders). The need is particularly acute for teams working with vulnerable victims and coping with different cultural contexts (explored in greater detail below). Research on deception and truthfulness –e.g. around the **credibility of testimonies** - has recently been under scrutiny by the Behavioural Science Team⁴. Communication needs – in relation to interviews and debriefing - pivot around the goals of *persuasion (influencing behaviour)* and *prediction (anticipating responses)* in line with pre-existing legal standards and established practices of training. Furthermore, in cases of more general contact with victims, there are requirements around **training** of NCA agents and even **recruitment** into the NCA: for example, there is a requirement to assess, even remotely, personal characteristics united with the need to detect '**personality traits**' and evaluate/handle '**skills for interaction**' - among new NCA recruits.
- 17.** On the other side of the spectrum, **pre-crime teams**⁵ tend to develop expertise both to **disrupt** criminal activities (interventions on offenders) and to **raise awareness** to protect potential victims. The role of communication in these cases is crucial and responds to needs of **predicting behaviour** (of potential targets, audiences and of potential offenders) and of **influencing behaviours** to

⁴ See Behavioural Science Team, *Deception and Credibility Assessment*, authored by Charlotte Gaskell, published on the 27 May 2014

⁵ More specifically, Behavioural Science Team, certain functions of Personnel Security, CEOP Innovation and Knowledge, ECC Threat Reduction, Lifetime Management, Missing Persons, Intelligence-Hub, certain functions of the Cyber Crime Centre and the Human Trafficking Centre

better calculate, and therefore disrupt, criminal activities. Communication, therefore, is not only a requirement of *interaction* but also of *action*.

18. For example, as shared by the Behavioural Investigative Advice unit, communicating to influence could also support **linking criminals to crime scenes** through an understanding of offenders' characteristics. Similarly, the Behavioural Science Team, through linguistic analysis and influencing activity interventions, wishes to strengthen the capability to **attribute characteristics to suspects**, to detect, for example, how many suspects are (or should be) involved in investigations and what is the best way to predict and understand their **intents**.

19. The NCA Behavioural Science Team holds the policies for **Influence Activity** and **Remote Assessment**, both aimed at such goals. In this sense there is a need to insist on influencing and predicting behaviour through **both language analysis and action-oriented interventions**. However, when it comes to disruption and influencing activity among other units, directly or remotely, there are mixed views on how and when to use such techniques.

20. The National Cyber Crime Unit (NCCU) has identified a clear need to develop abilities of persuasion *online*, to gain trust and show credibility as actors operating in cyber-space, in order to understand, infiltrate, and/or disrupt criminal platforms. The **social engineering** skills that the NCCU requires, however, need to be tailored to the cyber-environment. This needs extra attention and expertise in adapting classic models and theories for persuasion and **gaining trust** online. It is extremely important, especially in the cyber context, to be able to consider **unintended audiences** for any type of communication, to avoid misinterpretations, misplacements of trust and to prevent compromising actions.

21. Given resource pressures (e.g. in units such as Intelligence Hub, Lifetime Management, ECC Threat Reduction, Missing Persons), there is a need to develop innovative strategies to communicate with known offenders and with people of interests for the agency. These strategies could process **existing data** differently to produce knowledge, which could then be used to tailor awareness campaigns or to provide a better understanding of targeted groups and offenders' characteristics.
22. Some of the requirements concerned with **communication strategies** are of most relevance to those working on organised crime. This is the case with cyber or cyber-enabled crimes, as well as the requirements of Lifetime Management Team (concerned with **preventing** further criminal activities from persons of interest). It is also the case with post-crime teams when it comes to supporting a different use of interviews and contact with victims, which could lead to a better understanding of offenders' strategies and tactics.
23. There is a requirement to develop a more systematic approach to offenders belonging to a group – when applying communication techniques to influence and persuade. Serious individual offenders, on the other side, are often subjected to closer scrutiny at some point during investigations if they are not already approached by Behavioural Investigative Advisors. In post-crime cases there are very few requirements for the use of behavioural sciences and communication techniques that have not been met already or are not object of ongoing research within the units. On the contrary, in pre-crime cases the current practice in the use of policies to influence and predict criminal behaviour shows how there is still a tendency to use such techniques as **additional practices** within particularly complex investigations **rather than methods of choice** to routinely disrupt criminal activities. There is, therefore, a

requirement to develop techniques to deal with influencing and assessing group dynamics.

B. Criminal Roles and Motivations of Offenders

24. Behavioural analysis of serious crimes aims at securing identification and/or arrest of a subject (therefore it is performed largely by post-crime teams), while behavioural assessments of organised crime (performed largely in disruption, pre-crime, teams) is often understood as **influence** and **prediction of criminal activities**. In the latter case, measuring success in isolation from other policies and interventions is recognised as more difficult.

25. This leads to requests to increase and measure success when targeting different roles and careers in organised crime. More specifically, a first requirement relates to the exploration of **motivations behind organised crime** activities. There is an underlying assumption at the strategic level⁶ that organised crime is *principally* motivated by **profit** and money-making. But many of the units we spoke to⁷ have expressed an interest in extracting more complex understanding of criminal motivation that can come from SBS theories about individual personalities and social dynamics.

⁶ In the Home Office Strategy of 2013 as well as in the NCA plan and first strategic threat assessment of 2014

⁷ The Behavioural Science Team, the Vulnerable Persons Team, the Centurion Prison Team, the Lifetime Management Team, the Intelligence Hub, the Threat Reduction Team in the ECC

26. A better understanding of criminal motivations, with the support of SBS, is also needed by the Security Personnel Unit, to evaluate which “**red flags**” and **potential weaknesses** in recruits’ personalities criminals might exploit. This could prevent certain people from being allured and/or exploited by criminals.
27. Another requirement, strongly expressed by the Centurion Prison and Lifetime Management teams, relates to the evaluation of **convicted offenders** in prison and once/if they are released. This comes, firstly, from NCA’s difficulty in tracking individuals once they are convicted. The **lack of a criminal offence** of ‘organised crime’⁸ means that criminals involved in organised crime activities lose this official label once in prison. By looking at the behaviour of these convicted offenders and by assessing their roles inside and outside the prison, the NCA could gain valuable understanding of the real nature of organised crime groups in the country. Secondly, a study of these individuals’ criminal careers and motivations might shed new light on the risks accepted and calculated by certain individuals in their **career pathways**⁹ in organised crime.

⁸ A new offence of participation in the activities of an organised crime group is provided for in clause 41 of the current Serious Crime Bill, see http://www.publications.parliament.uk/pa/bills/lbill/2014-2015/0001/lbill_2014-20150001_en_1.htm , accessed 25/06/2014

⁹ See Brian Francis, Leslie Humphreys, Stuart Kirby, Keith Soothill Department of Mathematics and Statistics and Department of Applied Social Science, Lancaster University (2013) *Understanding Criminal Careers in Organised Crime*, Home Office Research Report 74, Crown Copyright

28. Lastly, there are requirements relating to **crimes against children**, both individual and organised. CEOP expressed the view that the established view about paedophile motivation (the pre-requisite for a **contact sexual abuse**) should be challenged. There is the risk that cases are dismissed if there is no sexual contact (or are assessed against this pre-judgement). Understanding other factors, as well as extracting intelligence from existing cases to predict behaviour, would be welcome additional practice, and could also inform educational campaigns targeted to potential victims. Moreover, because CEOP already has a system in place to group offenders into typologies, based also on personalities' traits, it would be helpful to be able to carry out individual assessment of offenders — either convicted or on probation - on the line of the proposal in the previous section. Interestingly, also the Behavioural Investigative Advice unit has shared interest in working on motivations of offenders, when it comes to **sexual contacts** (or lack of it), thus confirming the tendency, among serious (not organised crime) units like BIA or CEOP, to work on 'unusual' manifestations of crime, seeking more specialised approaches in their field.

C. Crime types, networks and group dynamics

29. It is well-established convention within the NCA to categorise targets of interest by **crime type** (i.e. drugs, cyber-crime, firearms, human trafficking, child exploitation, sexual assault etc). The organisational structure of the NCA, from the commands to the units, largely mirrors this. This also confirms the wish of NCA's management to avoid duplication in expertise and to centralise specialism. However, the focus on crime types changes significantly across units dealing with either serious or organised crime. In general, the

consideration that the NCA works around crime types calls for SBS in different ways according to the crime type each unit focuses on.

30. One set of practitioners¹⁰ would welcome SBS to increase their knowledge of certain crime typologies, especially in terms of the **group dynamics** of criminal organisations. Attention could usefully be paid here to assumptions about the correspondence between **sophistication** of criminal activities and **degree of organisation** of the criminal groups. SBS is likely to provide a richer understanding of the dynamics, leading to beneficial impacts both in terms of policy decisions and operational judgments.

31. These requirements call for a **qualitative study of criminal groups** from a variety of different circumstances, including the cyber dimension and human trafficking scenarios. The behavioural dimension of social networks will come from studies in **social psychology** that assess the effect of group dynamics on individuals according to **different personalities**. An understanding of social structures and organised crime networks based on social behaviours and attitudes (rather than on risk classifications) should offer possibilities to use this knowledge to **attack and destroy social bonds that tie the criminal organisation together**. Intelligence collection and storage is, of course, necessary to provide the source material for these insights.

¹⁰ The Behavioural Science Team, the National Cyber Crime Unit, the Human Trafficking Centre, CEOP, Vulnerable Persons Team (in certain functions) and Economic Crime Threat Reduction Team

32. The study of social networks (e.g. through social network analysis and studies of group dynamics), aims to **improve understanding of the roles and interactions within and between criminal groups** (both online and offline). By understanding social dynamics in criminal networks through behavioural analysis, theories and models, assumptions around the leadership and hierarchy of criminal groups can be challenged, dismissed or confirmed. *This would also be a valid argument for a behavioural science-led assessment inside prisons and/or with convicted offenders-*
33. There is interest in applying models and theories from **organisational and business studies** to criminal networks. There is uncertainty as to how this could work, but examples could include transferring insights from the study of legal corporations about the development of strategies for developing products and penetrating/segmenting markets.
34. Finally, teams dealing with **victims and vulnerable persons** could gain valuable insights from researchers working with psychology, social identity and network analysis. They can, for instance, evaluate profiles of targeted victims to understand how to prevent victims from being harmed and to better deal with certain victims. Comparative research might show, for instance, that victims of human trafficking share characteristics with victims of domestic abuse or child exploitation, as noticed by the Vulnerable Persons Team.

D. Cultural studies, collective cultures and crime

35. A challenge faced by many if not all of those interviewed is how to address and manage **cultural differences** effectively, in order to optimise

strategic and operational decision-making. Cultural studies can provide a better understanding of what makes criminal organisations “tick”.

36. The National Cyber Crime Unit’s requirements, here, relate to cultural “expressions” that may be readily perceptible in online settings, but may also emerge in language, slang and general communication.

37. **Remote language analysis** in **online** platforms has also been flagged as a requirement. This can make a crucial contribution in shedding light on the behaviour and attitudes of both offenders and targets. This is not only needed by the NCCU, but also by the Intelligence Hub (for scanning future trends), and by CEOP for gauging the online activities of suspects. The Personnel Security and Vetting Team would welcome a capability to speed up assessments of profiles of perspective staff (their online profiles on social media for example) for better outcomes in **background checks**.

38. It has been recognised by a number of NCA teams¹¹ that **anthropological studies** (i.e. the study and understanding of culture and societies) and can help those dealing with vulnerable persons, victims and suspects, especially when aiming to build **trust** or assess levels of truth-telling and deception. teams that deal, at any level, with vulnerable victims¹² have expressed an interest in using culturally-informed approaches during

¹¹ The Missing Persons Bureau, the Vulnerable Persons Team and the National Vulnerable Witness Advisor

¹² The Human Trafficking Centre, the Vulnerable Persons Team, the Anti-Kidnap & Extortion Team in certain functions, the National Vulnerable Victim Advisor, certain functions in CEOP

interviews (in line with law enforcement guidelines and requirements for interviewing), and when approaching victims outside the criminal justice process.

39. Understanding the **psychological status of victims** can be crucial to disrupt and prevent crime; this is the case, for instance, with human trafficking. Victims can, for instance, turn into perpetrators or put themselves or others in danger (in following values that are alien to most Western cultures). A greater level of **cultural awareness** is needed when dealing both with identified/known victims and with potential victims, especially in relation to crimes like human trafficking and modern forms of slavery.

40. Finally, the identification of the distinctive cultural traits of (vulnerable) targets and through cultural analysis can support the design of **awareness campaigns** and can also help predict (or influence) the behaviour of both victims and offenders. We see this working in the prevention of economic crime, child exploitation, or human trafficking.

E. Conceptual reading of data, crime trends and social trends

41. Units such as Anti-Kidnap & Extortion, Missing Persons, Vulnerable Persons teams produce periodical reports that present data and trends in their area of interest. Time constraints lead many of these reports to be limited to descriptive lists and graphs of criminal activities. But it is recognised that the units would benefit from a more conceptual analysis of crime and social trends (both in terms of intelligence analysis and in terms of historical data analysis).

- 42.** It has been suggested that **conceptual data-mappings** – i.e. the process to extract concepts out of data - would help transform business strategies in certain units. Conceptual mapping can be used both as soft measure, to discover new trends, and as a hard measure, to identify gaps and existing assumptions in practices. For instance: a) **transversal reading of existing data** can identify previously hidden crime trends, uncovering unknown synergies and improving dialogue between experts, b) the integration of these maps **with data about social trends** could help some units (e.g. Anti-Kidnap & Extortion, Vulnerable Victims teams and Human Trafficking Centre), identify links between the occurrence of serious and organised crime and **social change**, thus also assisting in challenging embedded assumptions.
- 43.** On a theoretical level, the units involved in this study would benefit from the re-evaluation of data in terms of conceptual mapping of trends for criminal markets; individual and group behaviour; social contexts and society's inclinations. This would help prediction and prevention.
- 44.** However, it is recognised that the NCA needs help to determine how to perform this task (and who should do so). A reading of data in terms of trend analysis could be done by the units themselves; but analysis performed by external resources might add something to the reading, given greater levels of detachment from data sources. The Concept Mapping tool - also known as Systems Mapping –used by the Behavioural Science Team, might represent a good starting point.

F. Measurement of effect of SBS

45. The *NCA Delivery Dashboard* published in April 2014 proposes a set of sub-questions to define the more general question ‘**How effective is the NCA’s response to these threats?**’ (Question KPQ2). Among these sub-questions two in particular are requirements for SBS across the NCA:

- **Sub-question 2.2:** Is the NCA effective at relentlessly disrupting serious and organised criminals and their groups involved in high priority and priority threats as outlined in the National Control Strategy?
- **Sub-question 2.5:** Is the NCA innovative and effective at using non-traditional interventions to cut serious and organised crime?

46. An assessment of effectiveness and innovation in the use of non-traditional interventions to disrupt and prevent means implies a closer look at issues of **validity** and **credibility** of SBS. This can be further specified as:

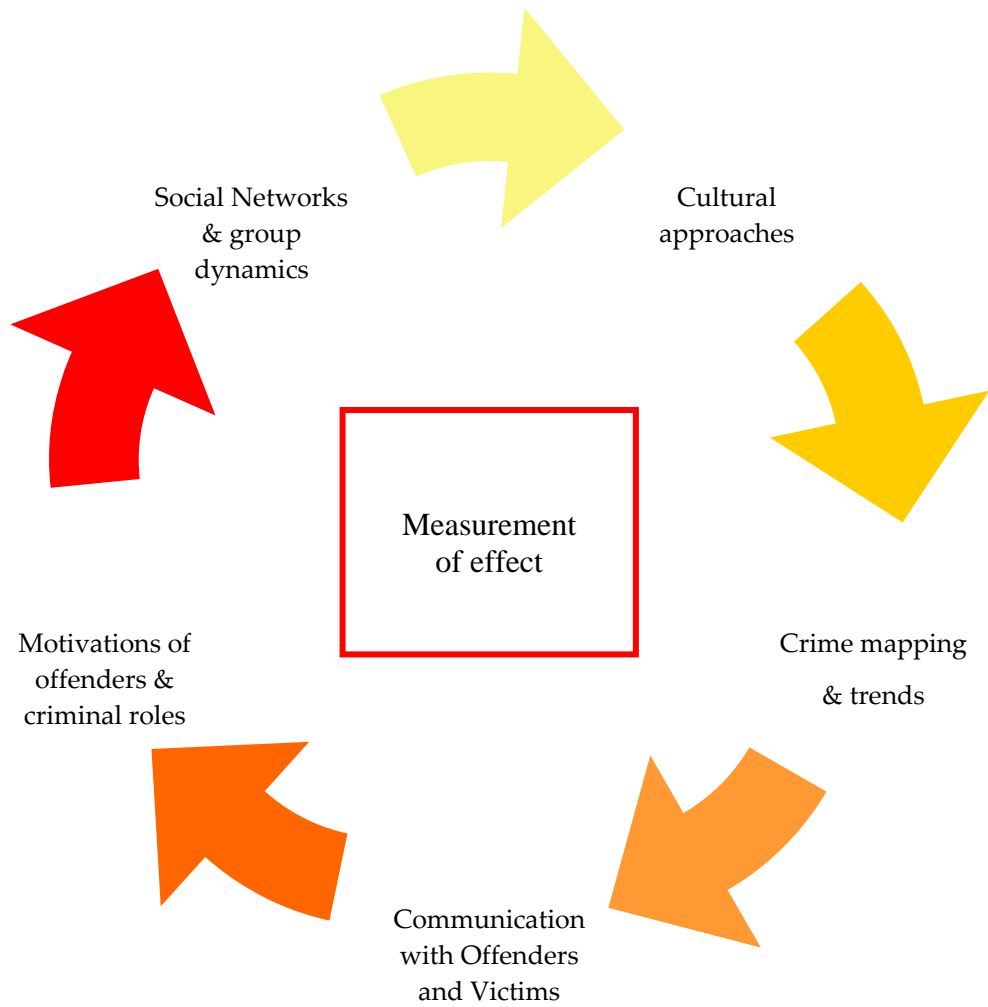
- a) the necessity to demonstrate (and measure) how effective and successful implementations of SBS are or can be, and
- b) the need to establish SBS applications as evidence-based, scientifically-derived products.

47. As for the first point – measuring effectiveness and success of SBS - the NCA recognised the challenges of finding ways to measure the **validity** of SBS applications. In the NCA, pre-crime and post-crime teams handle this differently. For instance, the NCA Behavioural Investigative Advice unit does not have a problem of proving success and results – since successful outcomes are intrinsically linked to the correct identification of the offender or the solving of the ‘unusual’ case. Conversely, the Behavioural Science Team describes and adduces some evidence for the application of SBS as a cost-effective method of

disruption. However, the need to measure how effective - in terms of success and cost-time savings – remains an issue in securing credibility with other units.

- 48.** In general terms, there is a perceived need within the NCA to see the impact of social and behavioural sciences demonstrated through an evidence-based process that goes **beyond common-sense values or anecdote**. Every unit involved in the study – especially pre-crime units – recognise the importance of having systemic assessments of the value and **credibility** of SBS applications to disruption of organised crime.

SBS requirements in summary



The Bigger Picture: beyond the NCA

49. The NCA is not alone in thinking about the application of SBS to policy and operations.. Local, national and international actors use SBS in such varied sectors as health care to national security. The National College of Policing stresses the importance of **evidence-based policing** (which SBS, of course, can support) for purposes of the national fight against serious and organised crime. SBS also features in the latest iteration of Europol's methodology for the Serious Organised Crime Threat Assessment (SOCTA), which includes reference to **Crime-Relevant Factors**¹³. These factors mirror developments in society that influence various aspects of serious organised crime assessments, such as geographical locations, behaviour of criminal actors and behaviour of victims. This study of vulnerabilities, which are very difficult to measure but important to consider, enables greater insight into current and future **weaknesses** and scenarios for serious and organised crime.

50. The capacity of SBS in **debunking myths** is widely recognised. For example, the Home Office shared with the Prison and Lifetime Management Teams the concern over the lack of investigations around **motivations of organised crime**. In particular, the Home Office's Strategic Team for Organised Crime would welcome further research investigating the assumption that organised crime is driven by money and profit, for both strategic and operational purposes¹⁴. Research into criminal motivation should help the

¹³ Europol (2013) *Serious and Organised Crime Threat Assessment*, The Hague

¹⁴ The Home Office has already started looking into careers in organised crime, see Brian Francis, Leslie Humphreys, Stuart Kirby, Keith Soothill Department of Mathematics and Statistics and Department of Applied Social Science, Lancaster University (2013)

Home Office to gain a better understanding of the **careers shifts within organised crime groups**. In particular, more evidence is needed in establishing the drivers in criminal careers from **youth gangs** for example, to higher profile **drug entrepreneurship**.

- 51.** But this extends beyond gangs and drugs. Every crime type under the Organised Crime “umbrella” might have different motivations. For instance, value will derive from mapping the interactions between members of on-line forums, deepening the knowledge of those people that later on could be object of influence activity. This approach might also assist efforts to acquire details on offenders’ locations and to penetrate disguised personalities.
- 52.** Europol’s expertise in support of member states often relies on **assumptions of rationality** for criminal behaviour. Rational choice and opportunity-based decision-making are confirmed as leading theories in defining interventions and anticipating criminal behaviours of serious organised criminals. It is the view of the European Cyber-Crime Centre that a **human approach to cyber crime** needs to be considered more robustly in addition to rational choices. The cyber world has profoundly changed interpersonal behaviour, speeding communications up and affecting the way personal identities are perceived and presented. In line with the requirements brought forward by the National Cyber Crime Unit of the NCA, the European Cyber-crime Centre feels that **a focus on targeting behaviours**, in addition to strengthening technologies, could be beneficial to develop knowledge and patterns of online interactions. The challenges of cyber criminality, in terms of investigations, disruption and prosecution, require a **re-definition of the impact and the targets** of law enforcement.

53. The Home Office also suggests focusing on those offenders in **Offender Management** programmes as a source of information and potential analysis. There is already a corpus of data available to support this work (eg from Prison Service records), which could help to reshape the UK's strategy against organised crime. SBS could also provide insights from the analysis of individual offenders' stories (inside or outside prison) – for instance, gauging what impact the use of the strategic label of 'organised crime' has on them, their lifestyles, their motivations and their career paths.
54. Meanwhile, Europol shares the need to improve approaches to **victims**, especially in Human Trafficking scenarios, through enhanced **cultural sensibility**. As with NCA units dealing with vulnerable victims and human trafficking, Europol's focus is on **cultural expectations** and values: alongside language barriers, these factors can influence the behaviours of victims and therefore impact upon the part they play in an investigation.
55. The Foreign Office would welcome an enhanced use of SBS to understand **motivations and capabilities of organised crime**. This is expected to deliver an enhanced intelligence competence within law enforcement. The use of behavioural scientists in an intelligence function would strengthen the **PREVENT** strand of the 4Ps model and would help to realise the "predicting" function that other NCA units have identified. For example, it could be useful to apply **social network analysis** to transnational groups or transnational settings, to gauge the influence of various individuals in terms of leadership and connectors within certain groups.

The role for SBS in the NCA.

Concluding Remarks

56. SBS are **theory-driven, hypothesis-based, and evidence-producing** fields of study that can account for some variance in the quality of crime disruption, prevention and fighting. This study has considered various positions and attitudes within the National Crime Agency and relevant partners, in order to assess the requirements of the agency in relation to SBS methods and theories. Both **research** and additional **training** are required by the units part of this study and would benefit the agency as a whole. Whether these research needs should be carried out through one centralised unit or through distributed expertise in different locations within the agency is a matter for strategic management.

57. As for the outcome of this qualitative study, NCA's units have appetite for a better, more focused use of SBS, especially for those cases where the analysis of human dimensions might make a difference in the outcome of the investigation. The appetite of the NCA for such research inputs is essentially two-fold. First, the agency feels the need to '**deal with the unusual**' through more theory-based and evidence-based approaches. The 'unusual' is largely understood as something that falls out of the rational/usual training of officers and/or, more importantly, a criminal activity that is under-researched, under-reported to authorities and therefore, might retain unclear features for investigators (it is the case of organized crime in the form of human trafficking for example). Second, the NCA's appetite for SBS is strongly linked to requirements for **evidence-based policing**. Indeed, as the prime value of the agency is a crime-fighting strategic mission, inputs from research in SBS – albeit welcome in practice - need to be operational, ready to use, digestible and most

of all have to produce visible (and measurable) results. As reminded in the NCA plan for 2014-15¹⁵, and often affirmed by Director General Keith Bristow, there is a need to pursue effective and **innovative ways** for *'non-traditional interventions to cut serious and organised crime'*.

58. SBS could contribute to each set of requirements through different theories, models or subjects. Like most changes involving human behaviours and attitudes, also this type of support would be expected to act on a longer, rather than shorter period. When thinking of the best way to address the requirements it is worth remembering that the term **"behavioural"** refers to overt actions: it includes analysis of human psychological processes such as cognition, emotion, memory, personality, actions, motivation and the interactions among these aspects among individuals. Additionally, the term **"social"** encompasses studies on socio-cultural developments, socio-economic practices, socio-demographic contexts, social interactions and influences among different types of social groups, from small groups to complex cultural contexts. This research area is very vast and has a focus on understanding both individual and social behaviours and on the use of such an understanding to predict or influence such behaviours. Ideally, in pursuing new ways to implement SBS into operational practices, the NCA could consider liaising with other Government's units that have been investing in research-led policy making. For example, the *Government Operational Research Service*¹⁶ offers a variety of skills and competences (soft systems, prediction and forecasting,

¹⁵ National Crime Agency, *NCA Annual Plan 2014/15*, Crown Copyright, page 13

¹⁶ See www.operational-research.gov.uk

regression analysis, time series analysis...), which could complement any effort in applying evidence-based research to practical issues.

❖ **Communication with Offenders and Victims:** research within this set of requirements is generally linked to theories of influencing behaviours through the combination of technology, psychological theory and media.

As previously noted, the NCA through the Behavioural Science Team has already policies for **Influence Activity** in place. This is probably the easiest and quickest requirement to address through in-house specialism. Intuitively, the use of **social marketing methods** or **situational crime prevention techniques** for example, can support the targeting and influencing of social groups. The former through knowing and altering habits and customs, the latter, for example, through designing the environment for visual order. Such techniques, among others, are based on individual or social psychology. Theories and models from **social psychology** can expand the knowledge around targeted audiences, both for victims and for offenders, in addition to cognitive and personality theories. Increasingly, studies on **social media** as well and **online interaction** need to be considered in this case. Social psychology includes, but it is not limited to, attribution theory, schemata theory, cognitive dissonance and generally evolutionary psychology theories, and uses models such as the **elaboration likelihood model**. This model maintains that information processing, for example in a persuasion attempt, can be based on the "likelihood of cognitive elaborations" that is, whether people think systematically and critically about the content of a message, or respond intuitively to superficial aspects of the message instead and to other instantaneous signs. The value of psychology to affect, influence and/or predict individual and social behaviours is well-understood and it could help, for example, also when dealing with **non-verbal interactions**

and **actions for communication**. The relationship between psychology and other social sciences is also intuitive and crucial for overcoming language barriers through the use of **linguistic expertise**. Applied behavioural analysis can be useful, for example, through **sociological theories of deviance** such as learning theories, labelling theories, social control theory and rational choice theory. Individuals and social contexts need to be understood before being successfully influenced. The challenge for the NCA has been identifying and practically applying reliable theory, which is valid for serious and organised crime contexts.

- ❖ **Criminal Roles and Motivations of Offenders:** research within this set of requirements can be approached from various points of view, which depend largely on the abovementioned difference between serious crime and organised crime.

When considering roles within organised crime, addressing the challenge presented by the previously discussed assumption that organised crime is motivated by money and profit tends to suit research topics in **criminology**. For example, **ethnographic research** in prison or among gang members, paired to sociological theory (for example differential association theory or strain theory) could, for example, fill the knowledge gap identified. Moreover, from a behavioural analysis point of view, individually-oriented research – through **cognitive-developmental theories** – would help criminological classifications of offenders as ‘tracked’ by the NCA in Lifetime Management programmes as well as in prison. **Classifications of offenders** in criminology would be helpful both to research motivations and career paths. These classifications derive from both psychological and psychiatric studies and include both empirical and theoretical studies of personalities in crime settings and their management needs. Reading available data through criminological classifications would

require acquaintance with such models and theories that is typical of **behavioural criminologists**.

- ❖ **Cultural approaches:** research within this set of requirements is concerned with (re)evaluation of cultural factors. Differences in cultural values and in personal or group habits can significantly affect choices and perceptions on the side of law enforcement, on the side of victims and also on the side of offenders.

Anthropology is generally concerned with the study of culture and evolution in different social contexts. The challenge with introducing anthropological expertise into the NCA would be related to a choice of which elements of cultural expertise to pick among many. Indeed there is no single anthropological approach that could work across all the cultural contexts that the NCA might be involved with. Nevertheless, building on cultural studies, in terms of academic outsourcing or in-house expertise, would be beneficial when tailoring approaches to social differences, in combination with language supports and **linguistic analysis**, both remotely, online and face-to-face. In this sense, the use of **experimental social psychology** could contribute to understand social dimensions of individual and group behaviours. For example, theories and practice of **humanistic/evolutionary** social psychology are concerned with the study of change and evolution; **social constructionism** analyses the making of individual and social identities; **psychodynamic perspectives** try to model life-cycle transitions and assess conscious and unconscious factors in individuals' decisions and values. Clearly, there is a need to understand how best to practically employ theories and models, in order to achieve operational results with strategic significance. Whether change is sought through psychological expertise or anthropological support, research in

this context should aim at increasing the awareness of NCA's units on how to handle cultural differences sensitively and practically.

- ❖ **Social Networks and Group Dynamics:** research within this set of requirements is concerned with finding new ways to read across related data to better understand networks and criminal groups.

Social Network Analysis could intuitively contribute to this objective, as a method to understand interactions among members of a group and therefore patterns and links between actions and actors. **Behavioural economics** as well, in challenging assumptions of rationality in group dynamics, might offer interesting reflections on interactive strategic decisions and group behaviour using the methods of experimental economics and experimental psychology combined. Similarly, **organisational and business theories**, through studies on corporate structures, leadership, hierarchies, innovation activities (marketing, product research and developments), crisis/risk management and handling of unexpected turns of events, albeit conducted in the legal world, could challenge assumptions about organised crime groups and offer new ways of looking at groups. More interestingly, a side of organisational studies that looks at potential problems and weaknesses within large corporations (power culture, crisis of leadership, reluctance to delegate and cooperate, overlapping of specialism...) could prove to be an innovative instrument to conceptualise (and predict) certain phenomena also in the illegal world, especially in view of applying theories on **group conflicts** to dismantle criminal groups.

- ❖ **Crime & Trends Conceptual Mapping:** research within this set of requirements is concerned with new and better ways to read (existing) data, chart criminal and societal trends and map new contexts and

concepts. Furthermore, the NCA seeks reliable **sets of indicators** to detect traces of the presence of organised crime in apparently licit economic activities. **Crime mapping** is a well-established **'soft' method of analysis,** and has already been part of the expertise of the Behavioural Science Team in SOCA and in the NCA. Indeed, qualitative crime mapping could better meet the behavioural requirements and help to read trends differently and purposefully. Specifically, concept mapping is able to link data to visualise trends and changes and to identify patterns, distribution of events (social and criminal). While **quantitative** maps portray numerical information (and they are therefore useful in identifying crime rates for example), **qualitative** maps can show offenders' characteristics (both for serious and organised crimes) and can focus on themes or issues of interest. Considering the requirements articulated in this study, a combined, **cross-sectional** reading of data produced by various units, in a way which goes beyond quantitative figures, could be helpful in terms of disruption and prevention purposes to analyse problems, changes, implications and support policing approaches. Crime maps can be used both for intelligence and for prevention purposes, but obviously rely on post-crime data. Ideally, a reading of data cross units, from geographical points of view, for crime typology, offender or victim focus, would be helpful to increase coordination in the agency as well as identify areas of overlapping and synergies across the various areas of intervention. Moreover, reading **societal trends,** in an attempt to identify crime factors, could help crime prediction and prevention. **Market analysis, trend watching** and **intelligence collection,** all assemble data in different ways to **reduce the uncertainties** of future events. For example, as exemplified for example by

the Police Academy of the Netherlands in 2008 in a study of societal trends and crime relevant factors¹⁷, data from the various units of the NCA could be read across to highlight **main trends** – general drives of contemporary society (individualisation, globalisation, technology progress...); **macro-trends** – abstract concepts that affect large parts of society (information revolution, cultural diversity, security and risk society, societal cohesion...); **meso-trends** – changes that take place in various parts of society and affect various specific population categories (social media, mobility, vulnerability of infrastructure, religious factors); **micro-trends** – specific forms of crime manifestations in certain areas. The analysis of trends, at any level, naturally increases the understanding of crime factors and strengthens the possibility to intervene more effectively.

- ❖ **Measurements of effect:** research for this requirement would seek to improve techniques to determine the effects of the application of SBS for either operational or strategic use in order to support a credible evidence-based approach.

Finally, as shared by the Behavioural Science Team and by the Home Office, it is crucial to **measure the effectiveness** of policies based on applying SBS to influence behaviours for disruption, awareness raising, risk management and trust monitoring. Any evidence-based policy implemented needs to consider measures of effectiveness *before* any implementation. For example, impact could be measured through case

¹⁷ Klerks Peter, Kop Nicolien (2008) *Societal Trends and Crime-relevant factors. An overview for the Dutch National Threat Assessment on Organized Crime 2008-2012*, Police Academy of the Netherlands Lectorate for Crime Control & Investigative Science, Apeldoorn

studies or by designing two or more credible options to approach the same tactic in order to see which one produces results and in what terms. Lastly, **measuring changes in behaviours** *after* implementations of policies is always very difficult and therefore requires inputs and **clarity of methods** from the very beginning. The challenge is in a) determining valid and reliable measures, while b) accounting for any/all confounding variables existing in the given contexts. As shared by the NCA Behavioural Science Team, the availability of time and the intrusion of general background (noise) in the environment are other constraints that are frequently encountered.

Considerations on the evidence-based application of behavioural sciences made by the European Commission Joint Research Centre Institute for Prospective Technological Studies in 2013 on '*Applying Behavioural Sciences to EU Policy-making*'¹⁸ could be adapted to the fight against serious and/or organised crime as understood by the NCA. This supports a **Behavioural Element** in the fight of serious and organised crime: 1) when behaviour change is the main objective of the operation; 2) when people's behavioural response affects the effectiveness of an operation; 3) in the design of the operation process itself to adjust biases, heuristics, and a number of other influencing factors on the decision-making process. Moreover, both the National College of Policing and the Behavioural Insight Team in the UK Cabinet Office insist on **evidence-based** trials¹⁹ of behavioural sciences in policy-making and policing approaches in designing policies to improve

¹⁸ Van Bavel René, Herrmann Benedikt, Esposito Gabriele, Proestakis Antonios (2013) *Applying Behavioural Sciences to EU Policy-making*, European Commission Joint Research Committee Institute for Prospective Technological Studies, Seville (Spain)

¹⁹ UK Cabinet Office Behavioural Insight Team (2012) *Applying behavioural insights to reduce fraud, error and debt*, London

and influence behaviour in certain contexts. Insights and tests to improve consciousness and awareness in policy-making and crime-fighting, derive from SBS and are **cost-effective innovations**. The UK Cabinet Office proposes the '**test, learn, adapt**'²⁰ approach to apply - and measure the effects of - SBS to policy-making.

59. SBS is a **vast realm of theories and models** constantly evolving and constantly changing. From behavioural criminology to economics, from verbal and non-verbal interactions models to influence behaviours techniques, from social psychology to business models, SBS has various research purposes and offers diverse outcomes. If addressed correctly, through evidence-based approaches and with an innovative mind, SBS could add human and social dimensions to traditional intelligence and policing techniques. As noticed by Sir John Beddington '*ensuring government is properly informed by science is something that all scientists should be involved in*'²¹. In addition, '*the evidence base from pure*

²⁰ Haynes Laura, Service Owain, Goldacre Ben, Torgerson David (2012) *Test, Learn, Adapt: Developing Public Policy with Randomised Controlled Trials*, UK Cabinet Office Behavioural Insight Team, London. The Test, learn and adapt approach aims at:

- *testing* an insight in a new context;
- *learning* which aspect of it is working (or not);
- *adapting* the approach to achieve better results in similar circumstances

²¹ John Beddington (2013) 'The science and art of effective advice', in R. Doubleday and J. Wilsdon '*Future Directions for Scientific Advice in Whitehall*', University of Cambridge's Centre for Science and Policy, Science Policy Unit and ESRC STEPS Centre at the University of Sussex, Alliance for Useful Evidence, Institute for Government, Sciencewise, p.31

*science is used at all stages of the policy lifecycle, but the use of applied scientific evidence in support of engineering-based policy execution has diminished in the UK in recent years*²². The use of research-led approaches to crime fighting, therefore, needs to be not only evidence-based but also object of specific policy-making.

²² Brian Collins (2013) 'Engineering Policy: Evidence, Advice and Execution', in in R. Doubleday and J. Wilsdon '*Future Directions for Scientific Advice in Whitehall*', University of Cambridge's Centre for Science and Policy, Science Policy Unit and ESRC STEPS Centre at the University of Sussex, Alliance for Useful Evidence, Institute for Government, Sciencewise, p.73

Appendix A

Semi-Structured – In-depth Interview Process

Starting points for discussion across NCA units

1) Background of the work of the unit;

- a. Do you at any point use the wording social or behavioural sciences in policies, regulations, internal documents?
- b. Does Behaviour explicitly feature in any current process for measurement of effect?
- c. How do you/your unit understand serious and organised crime?
- d. Can you identify areas where S&BS are used?
- e. How does your work contribute within the 4 Ps framework and the NCA policy?
- f. How does your unit currently measure effect in your business area - is 'behaviour' explicitly mentioned and considered in that process?

2) Thinking of SBS in general;

- g. Can you think of benefits or issues using S&BS across the NCA?
- h. How important is to define/understand individual or social behaviour in serious and organised crime cases?
- i. Do you think S&BS are or should be a part of the official strategy to fight serious and organised crime or are they an add-on service?

3) General comments of what S&BS can add to current practices of the unit;

- j. Can you think of some examples of S&BS already in place/used within your unit and work?
- k. Are any of the above terms explored or used in any business plan, policy or operating procedure compiled for your business area?

4) How S&BS might work in practice;

- l. Can you identify specific fields in S&BS that can be of use (social psychology, cognitive psychology, social marketing, influence

behaviour, detecting truthfulness/deception, behavioural economics, risk assessments, mapping crime patterns etc) for your unit?

5) How S&BS can be added to/incorporated in current practices;

- m. Can you identify areas of weakness in the current practice that might benefit from the introduction or a different use of S&BS?
- n. Can you think of specific examples of the application of S&BS in current practices?
- o. Can you foresee any overlapping in the work other units are doing at the best of your knowledge?

6) Going further;

- p. Do you have any specific idea on how to implement those changes (if any?)

7) Direct measures, factors or circumstances, which would make it easier or enable the unit to make use of S&BS;

- q. Available technologies – does the unit need something extra or different to (implement) apply S&BS?
- r. Does any of the staff in your unit currently have the necessary competency, skills and knowledge to effectively apply S&BS?

8) Who implements the changes (if anyone)?

- s. Do you believe that the NCA has any internal capacity to apply S&BS sciences to your current practice (and if 'yes' to identify where it is).

9) What would success look like?

- t. How would you measure success in new implementation of S&BS once in place?