

Problem-Oriented Policing in England and Wales 2019

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EXECUTIVE SUMMARY

‘Problem-oriented policing’ (POP) is an approach for improving police effectiveness. In the United Kingdom (UK), it is also referred to as ‘problem-oriented partnerships’ or ‘problem-solving policing’. Problem-solving policing calls for the police to focus not on individual incidents but on problems - defined as recurrent clusters of related incidents that affect the community. It advocates a structured process whereby the police (1) systematically identify persistent problems, (2) undertake in-depth analysis to determine the conditions giving rise to these problems, (3) devise and implement tailored responses and (4) work out if the chosen responses were effective. At its simplest, POP outlines a method for dealing with localised problems. In its most general sense, it outlines an approach for how the police operate.

Problem-solving has been widely adopted by police forces in the UK and internationally. Successive reviews, case studies and experiments have shown POP to be an effective way of reducing crime and disorder. Yet despite extensive evidence demonstrating the effectiveness of problem-solving, research also identifies recurrent challenges both in the implementation and practice of a problem-oriented approach. Consequently, POP has not become a persistent feature of policing in the UK.

In 2017, South Yorkshire Police received a £6.35 million grant from the Home Office Police Transformation Fund (PTF). The grant was to support the delivery of a three-year national project (2018-2020) intended to reduce demand on the police service by promoting, facilitating and advancing problem-solving among police and partner agencies in England and Wales. The project was named the *Problem Solving and Demand Reduction Programme* (hereafter referred to as the PSDRP).

This report presents the findings of a mixed methods study undertaken in support of the PSDRP. The purpose of the study was threefold:

- To determine the extent, nature, patterns and quality of police problem-solving in England and Wales
- To identify obstacles and enablers to the implementation, spread and practice of problem-solving
- To elucidate the experiences and perspectives of those doing problem-solving.

This report describes the ‘state of the art’ in respect to problem-solving in England and Wales in 2019. It also draws on previous research to examine changes and continuities in police problem-solving over time. The findings in this report are intended to act as a baseline against which the longer-term impact of the PSDRP could be measured. They also provide insights to police forces seeking to better implement, embed and advance a problem-oriented approach.

This report draws on data collected from twenty of the forty-three territorial police forces in England and Wales. Eight of the twenty police forces were selected purposefully to ensure adequate representation of forces with different histories of and experience in POP. A further twelve police forces were selected at random. Data were collected in three main ways: (1) a cross-sectional online anonymous survey distributed to all police officers and staff in nineteen police forces (n = 4,141); (2) content analysis of problem-solving documents supplied by

fourteen police forces (n = 77); and (3) semi-structured individual interviews with police officers and staff identified as being knowledgeable about problem-solving in the eight purposefully selected police forces, as well as a selection of individuals identified through snowball sampling and those associated with the PSDRP (n = 111). These data were supplemented with a systematic assessment of the 71 submissions to the 2018/19 Tilley Award, an annual award that recognises excellence in problem-solving in the UK.

The use of multiple data sources in this study was a deliberate attempt at ‘triangulation’, whereby biases or one-sided views that may be caused by using a singular source may be checked by drawing on several. However, it is acknowledged that despite the use of multiple data sources, the sample of participants in this study may not be representative of the police service of England and Wales as a whole. They are best considered an informed and interested group of practitioners with the ability to report on their experiences and perceptions of contemporary police problem-solving. It is possible that a lack of representativeness means that the results reported here may be biased towards positive views of problem-solving. And, where shortcomings in delivering problem-solving are identified, they will if anything, therefore, underestimate the challenges in making it normal police business.

The main findings of this research are as follows:

Drivers of problem-solving in the UK

There is a resurgence of interest in problem-solving among the police in England and Wales. Examples of problem-solving were found in all police forces that took part in this study. Twenty-six police forces submitted entries to the 2018/19 Tilley Award and thirty-four did so in 2019/20.

Interview participants attributed the renewed interest in problem-solving to two main drivers, both of which concern the impact of austerity measures beginning in 2010:

- First is the reinvigoration of neighbourhood policing in England and Wales, within which problem-solving is seen as a core responsibility, and which has demised in the UK since 2010 because of cuts to police funding. Specific developments cited by participants include the College of Policing’s (COP) neighbourhood policing guidelines, the inspection process of Her Majesty’s Inspectorate of Constabulary and Fire & Rescue Services (HMICFRS) and the National Police Chiefs’ Council (NPCC) crime prevention strategy.
- Second is an acknowledgment of the ineffectiveness of the reactive model of policing which came into prominence following the demise of neighbourhood policing. Against this backdrop, participants talked of problem-solving being revived to better manage the current demands on the police service.

Organisational location of problem-solving

Police problem-solving is primarily performed in neighbourhood policing teams. Protected time, greater resources and closer proximity to the community were all cited as reasons why problem-solving is more apparent among neighbourhood policing teams than in other areas of police business. This is not to say that *all* neighbourhood officers routinely undertake

problem-solving (nor that it is only neighbourhood officers who do so). Interview participants described how neighbourhood policing teams were often stretched and routinely abstracted to response roles to meet current levels of demand, thereby limiting the capacity to do effective problem-solving. This process of abstraction was also attributed to budget cuts due to austerity.

Attitudes towards problem-solving

There is widespread awareness of and a positive attitude towards problem-solving amongst police personnel. 78% of survey respondents were confident that they understood what problem-solving involves. Moreover, 88% of respondents agreed that problem solving is “an important part of policing in general” and 86% agreed it is “relevant to almost every area of policing”. Interview participants also expressed strong support for problem-solving as a model for effective policing.

Problem-solving in practice

Just under half of survey respondents reported having been involved in a project which they considered to be problem-solving in the past 12 months. Self-reported involvement in problem-solving varied considerably by role, however. Three-quarters of participants in neighbourhood roles reported having been involved in a problem-solving project in the past year compared to less than one quarter of participants in response roles.

SARA (Scanning, Analysis, Response and Assessment) emerged as the most popular model for doing problem-solving, although alternatives were identified. Recurrent weaknesses in the application of SARA, described by interview participants and identified through assessment of Tilley Award entries, concerned the depth and quality of problem analysis, the assessment of responses and a tendency to fast-track to response implementation, without having properly understood the problem.

Fourteen of the twenty participating police forces were able to supply problem-solving related documents. Most were guidance documents on how to do problem-solving. Of the documents returned:

- all endorsed SARA or its extension OSARA (where the ‘O’ stands for ‘objective’) as the model for doing problem-solving
- most framed problem-solving as part of neighbourhood policing, albeit a small number of documents emphasised the relevance of problem-solving to other areas of police business
- many made reference to relevant theories and concepts from the crime prevention literature, most notably the routine activity approach, crime analysis triangle and situational crime prevention
- little was said about the importance of and mechanisms for working with partners when problem-solving
- only one police force supplied guidance on ways to introduce and embed problem-solving across an entire police organisation.

There is evidence of problem-solving being applied to a diverse range of police-relevant issues, both crime and non-crime related. However, anti-social behaviour emerged as the issue most frequently targeted using a problem-solving approach, accounting for 23% of all projects described by survey respondents and 26% of all 2018/19 Tilley Award submissions. Examples of problem-solving being used to tackle police priorities such as cyber-crime and human trafficking were rare, comprising less than 5% of Tilley Award entries. Interview participants also suggested that problem-solving was more likely to be applied to high-volume, 'lower level' crimes than to more serious or complex ones.

What constitutes a 'problem' for the purposes of problem-solving appears to be wide, and departs from Goldstein's original conception. For example, both survey and interview respondents provided examples of problem-solving being applied to 'internal police matters' such as the implementation of a new computer system or the reduction of long-term staff absenteeism. Likewise, interview participants described cases of 'problem-solving' being used as part of a multi-agency case management approach to address the needs of specific individuals or families who routinely come into contact with the police (such as vulnerable individuals who repeatedly go missing or high-risk offenders).

Partnership working remains a common component of problem-solving. All but one of the 71 Tilley Award entries involved the police working alongside partners, ranging from local authorities and social services to the community, charities and private sector. Interview participants also described routinely working with partners when problem-solving. However, interview participants also described recurrent challenges in partnership working, most notably differences in ways of working and difficulties in engaging with partners beyond those who commonly work with the police, in particular the private sector.

Analysis of Tilley Award entries suggests a wide range of data sources are being drawn on when defining and analysing problems. Although police incident and crime data remain the dominant sources of information for problem-solving initiatives (used in 82% of entries), there were also examples of data being taken from community surveys (28%), local authorities (11%) and health services (10%). A similar pattern emerged from the analysis of survey data in which 84% of respondents reported having used information from partner agencies when problem-solving.

Use of the research literature to inform problem-solving was found to be minimal. Among survey respondents, fewer than one in ten reported making frequent use of external resources relevant to problem-solving such as the POLKA Knowledge Bank, College of Policing Crime Reduction Toolkit and the Knowledge Hub, although a majority of respondents said they had heard of these resources. Usage rates were even lower for non-police affiliated resources such as POPCenter.org, CrimeSolutions.gov and the Campbell Collaboration library of systematic reviews.

Working with external researchers when problem-solving is rare. Only 2% of survey respondents said they often discussed problems with researchers from universities or other research organisations, with 73% saying they had never done so. Respondents attributed this lack of engagement to shortages of time, concerns about sharing data with those external to the police, a perception that academia can offer little of worth to practical policing, and a

general lack of knowledge about how researchers might usefully contribute to problem-solving and how to go about contacting them.

Enforcement-based interventions emerged as a common response when problem-solving. For example, they were the most frequently used response in the 2018/19 Tilley Award entries (reported in 49% of all the entries) (engagement was used in 37%, situational crime prevention in 34%, organisational development in 25%, education in 24%, treatment in 17% and training in 4%). The dominance of enforcement-based interventions in problem-solving reflects the findings of previous research.

The assessment of problem-solving initiatives remains one of the more challenging aspects of problem-solving, as has been found in previous research. It is commonly missing or weak. To illustrate, in the Tilley Award entries, whilst pre-post designs were the most common approach for evaluating the impact of problem-solving initiatives, in just under a quarter of entries, the assessment component was weak or absent. Challenges in assessment for problem-solving was also a recurrent theme among interview participants.

Obstacles and enablers of problem-solving

There remain significant obstacles to the widespread adoption of problem-solving.

- 43% of survey respondents said they did not have access to information necessary to perform effective problem-solving
- Fewer than 15% of survey respondents felt they had the time and resources to do effective problem-solving.

The loss of analysts over the past decade in England and Wales emerged as a central theme in this research. Many interview participants voiced concerns about the lack of analytical support for problem-solving which was perceived to be the result of austerity measures post-2010.

Survey and interview respondents identified the following factors as enablers of problem-solving:

- greater time to dedicate to problem-solving
- greater resources invested in problem-solving
- the provision of high-quality training on problem-solving
- greater analytical support
- the availability of high-quality guidance
- senior leaders who understand and promote problem-solving
- line-managers who value and support problem-solving
- promotion processes that recognise and reward problem-solving
- awards and rewards to incentivise problem-solving.

Embedding problem-solving across an entire police force remains a significant challenge. Even in police forces with a longstanding commitment to problem-solving, interview participants felt that the approach is far from mainstreamed. Changes in senior leadership, a lack of

resources and the predominance of a 'catch and convict' police culture were all cited as reasons why problem-solving is both liable to fade and why it struggles to permeate all areas of policing.

Police and Crime Commissioners and their equivalents were generally considered to be an important but as yet underutilised enabler of problem-solving. Although examples were reported of Police and Crime Commissioners supporting and facilitating problem-solving, be it through funding or forging relations with partners, this practice was not observed across all participating forces.

Conclusions: problem-solving today and going forward

This report provides a snapshot of the state of police problem-solving in England and Wales in 2019, and of the conditions deemed necessary or useful for it to flourish. To summarise, problem-solving in England and Wales in 2019:

- Is considered relevant to dealing effectively with both internal administrative issues and the full spectrum of crime and non-crime issues that fall within the police remit
- Has a range of enthusiastic supporters and advocates
- Often involves partnership working
- Is largely delivered through the SARA model and its extension OSARA
- Exhibits some good examples across many police forces, dealing with a wide range of internal and external problems
- Is largely thought to be applicable throughout police organisations
- Is largely (though not exclusively) confined to neighbourhood policing
- Has been inhibited where neighbourhood policing has atrophied and analysts withdrawn as a result of austerity
- Is largely uninformed by reputable research findings
- Is largely undertaken without the involvement of external researchers
- Is largely uninformed by sophisticated analysis and fails to make use of diverse data sets
- Is rarely followed by technically adequate assessment
- Often involves some form of enforcement
- Confronts difficulties in mobilizing certain third parties, particularly those in the private sector
- Encounters some cultural obstacles, where what is entailed departs from traditional police practice
- Is inhibited by police officers who feel that they lack the training, expertise, or time to undertake it
- Rarely focuses on major contemporary police issues such as cybercrime or modern slavery.

Conducive conditions for problem-solving to thrive, moving forward include:

- Enthusiastic and visible leadership from Chief officers and clear and unambiguous management downwards
- Rewards to act as incentives for active and positive involvement in problem-solving

- Involvement of third parties in the development and delivery of responses
- Relevant, accessible and user-friendly training and guidance
- Co-operation between neighbourhood policing teams and other specialists within the police service
- Access to competent and expert advice and support in analysis, assessment and the development of responses to problems
- Access to reliable and relevant police and other data sets for analysis and assessment
- Systems, such as promotion processes and awards that recognise and reward engagement in systematic problem-solving
- User-friendly and simple systems to log and monitor problem-solving initiatives
- Involvement with relevant partners in dealing with problems
- Support from Police and Crime Commissioners and their equivalents
- Time for key staff to devote to longer-term problem-solving
- A police culture that supports problem-solving and cultivates innovation
- Continuing national support for problem-solving at all levels in policing, for example by the COP, HMICFRS and NPCC.

History shows that interest in police problem-solving has fluctuated in England and Wales over the past 40 years. The successful bid to the PTF that led to commissioning the research reported here reflects contemporary recognition that a problem-solving approach can help improve policing and reduce demand. It seems to have helped boost the interest and involvement in problem-solving in a significant number of police forces in England and Wales, but it is clear that there remains much to be done. Despite the enthusiastic support from those officers and police staff who are trained and fully familiar with problem-solving, it has not yet reached a tipping point where it has become the standard way of working, even in forces with a long history of commitment to problem-solving.

Capitalising on the resurgence of interest in problem-solving is important. Failure to do so may lead to the characteristic decline of problem-solving and reversion to traditional methods of policing. Yet mainstreaming problem-solving has proven challenging, and will require continuing efforts over the coming years to sustain and embed the kinds of conducive conditions that are listed above. Research can help. In summarising what is known about contemporary problem-solving, this study has also identified knowledge gaps in need of further study, most notably research which is oriented towards determining the conditions necessary to cultivate, embed and advance problem-oriented ways of working. Promising areas of enquiry emerging from this research include: (1) how to effect culture change among police and partners to that which embraces problem-solving? (2) how best to “train” problem-solvers? And (3) what constitutes a “good” system for the purposes of monitoring and recording problem-solving?

In an effort to help mainstream problem-solving, two practitioner focused guides have been produced as a result of this study. They are aimed at supporting and facilitating problem-solving work. The first guide is directed at senior officers and managers who are looking to implement problem-solving within their organisation. It is a review of what is known about implementing and sustaining problem-solving. It focuses on three conditions conducive to the



successful implementation of problem-solving – leadership, understanding and infrastructure – and provides examples of good and poor practice. The guide ends with a self-assessment tool to help determine an organisation’s readiness for and progress in implementing problem-solving. The second guide seeks to increase understanding of problem-solving and provide a wider range of techniques to help officers and staff deliver problem-solving initiatives. Both guides are available on the Knowledge Hub or from the authors on request.

INTRODUCTION

The Police Transformation Fund (PTF) was established by the Home Office in 2016. The stated aim of the PTF is to *'transform policing by investing in digitalisation, a diverse and flexible workforce and new capabilities to respond to changing crimes and threats'*ⁱ. To date, the PTF has awarded over £235 million to 127 projects.

In 2017, South Yorkshire Police received £6.35 million from the PTF to support the *Problem Solving and Demand Reduction Programme* (hereafter referred to as the PSDRP). National in scope and spanning a three-year period (2018-2020), the PSDRP sought to reduce demand on the police service through providing the infrastructure, methods, knowledge and support to both increase and broaden the uptake of problem-solving among police and partners.

This report presents the findings of a mixed methods study carried out in support of the PSDRP. The purpose of this research was threefold:

- To determine the extent, nature, patterns and quality of police problem-solving in England and Wales
- To identify obstacles and enablers to the implementation, spread and practice of problem-solving
- To elucidate the experiences and perspectives of those doing problem-solving.

This report is not an assessment of the progress and impact of the PSDRP. Rather the intention is to establish a set of contemporary indicators of police problem-solving in 2019 which can act as a baseline against which the longer-term implementation of problem-solving in policing could be measured.

The remainder of this report is organised into four chapters. The next chapter describes problem-solving and provides a brief history of its application in England and Wales. The report goes on to describe the methods and data used in this study as well as the main limitations. This is followed by a presentation of the results of the research organised into three broad themes. The report concludes by summarising the main findings of this study and their implications for embedding, spreading and advancing problem-solving.

WHAT IS PROBLEM-SOLVING POLICING?

'Problem-oriented policing' (POP) or 'problem-solving' (as it is commonly referred to) was first proposed by Herman Goldstein in 1979. It emerged following a critique of prevailing police practices in which incidents were typically dealt with on a case-by-case basis using 'standard' or 'reactive' police tactics (for example, police patrol, rapid response to calls for service, and enforcement of the criminal law) (Goldstein, 1979; 1990). Goldstein argued that this *incident-driven* policing yielded only short-term effects that often resulted in the police returning to troublesome locations time and again (Goldstein, 1979; 1990). He suggested that the police should instead focus on addressing clusters of related incidents; what Goldstein defined as *problems* (Goldstein, 1979; 1990). Problem-solving is an approach for improving the effectiveness of policing. It advocates a structured process of identifying a problem, analysing that problem, developing tailored responses to that problem and evaluating the impact of selected responses (Goldstein, 1990).

This structured process for doing problem-solving was later encapsulated in the acronym SARA (Scanning, Analysis, Response and Assessment) (Eck and Spelman, 1987). Scanning refers to the identification of a problem that is open to intervention. It requires that the police (1) better recognise the relationships between the incidents they are called on to deal with (such as similarities of behaviour and location) and (2) better understand the conditions that give rise to them. Following on from the identification of a problem, information should then be systematically analysed to provide a comprehensive and insightful understanding of the problem, drawing on a wide range of available sources (Scott, 2000). The purpose of analysis is to understand why the problem takes place and not merely to describe problems. It is to identify 'pinch points' – those points at which interventions might be expected to have an impact on the presenting problem. Once problems are identified and systematically analysed, responses need to be developed and implemented. For Goldstein (1990: 44) the aim was to be far reaching and imaginative in selecting responses, particularly to think about those that go beyond the application of the criminal law. He drew attention to a wide variety of possibilities – including leveraging resources from agencies other than the police, mobilising the community and altering the physical environment. Problem-solving lastly involves assessment of the chosen response(s) to ensure what is put in place is effective and sustainable (Goldstein, 1990).

In the forty years since Goldstein's original formulation, police forces across the world have experimented with problem-solving. Numerous reviews, case studies and experiments have shown POP to be a highly effective way of addressing a wide range of security and safety issues (Scott and Clarke, 2020; Hinkle et al. 2020)ⁱⁱ. Yet despite extensive evidence on the effectiveness of problem-solving, research also identifies recurrent challenges both in the implementation and practice of a problem-solving approach (described below). As a consequence, with rare exceptions, it has not become a routine part of police work.

PROBLEM-SOLVING POLICING IN ENGLAND AND WALES: A BRIEF HISTORY

There is a long history of problem-solving in England and Wales. In the early 1980s Surrey Police, the Metropolitan Police and Thames Valley Police all experimented with the approach. By the mid-1990s the list included Lancashire, Northumbria, West Yorkshire and Merseyside (Leigh *et al.* 1998). The principles underlying POP influenced several developments in policing and crime reduction practice – for example the 1998 Crime and Disorder Act, the National Intelligence Model (Bullock, Erol & Tilley, 2006), and Neighbourhood Policing (the dominant model through which community policing is delivered in England and Wales).

Despite much optimism for and interest in problem-solving, history has shown that its introduction has been far from straightforward. It has been characterised as a series of isolated projects rather than a process of diffusion through entire organisations (Kirby & Reed, 2004). Analysis is often basic and can be overly reliant on police data; responses tend to emphasise traditional enforcement; and assessment is often underdeveloped and sometimes missed out altogether (see for e.g. Scott, 2000; Read & Tilley, 2000; Bullock, Erol & Tilley, 2006). These points are returned to as we discuss the findings of this study. Moreover, bursts of enthusiasm that have led forces to embrace problem-solving and attempt to disseminate it have been followed by waning interest and reversion to traditional methods of policing, notably with changes in leadership and priorities and loss of resources.

Studies have drawn attention to six organisational features that can facilitate or inhibit the adoption of problem-solving.

First, *leadership* is important in shaping whether problem-solving takes hold or otherwise (Scott, 2006). Support from senior leaders facilitates allocation of resources thus increasing capacity and conveying important messages about how policing should be done. The adoption of problem-solving seems to be more widespread where senior managers are knowledgeable and directly involved in its delivery.

Second, *committed and enthusiastic individuals* can help in embedding problem-solving (Bullock, Erol & Tilley, 2006). However, relying solely on such individuals in this way risks the long-term resilience of problem-solving since these individuals will eventually move on (Scott, 2000; Kirby & Reed, 2004). Similarly, some studies have also noted how the establishment of specialist groups within police forces can facilitate the delivery of problem-solving. Such ring-fenced teams have more time to look in detail at problems and may further contribute to the implementation of problem-solving by providing advice and practical support to others (Bullock, Erol & Tilley, 2006). Similarly, structures and processes (such as tasking, filing and record keeping systems), can steer, co-ordinate, and share the learning from problem-oriented responses and thereby be helpful in facilitating implementation (Read & Tilley, 2000).

Third, *the way that a police force is structured* can influence the degree to which problem-solving is implemented and how. Police forces are typically structured to facilitate the delivery of a standard reactive model of policing and have usually been hierarchical, based on semi-military lines (Goldstein, 1990). POP requires a more flexible approach (Metcalf, 2001). Police performance management regimes may be especially important here. Conventional indicators based on response times, arrests and detection rates assume the reactive model. They do not hold officers to account for engaging with problem-solving (Braga, 2002; Metcalf, 2001). Relatedly, it has been suggested that rewards, such as competitions, awards, and commendations, may be important in motivating officers to engage seriously in problem-solving.

Fourth, *analytic capacity* is important for the delivery of problem-solving. Studies have noted both that a lack of analysts and the misuse of those who are available limits what realistically can be achieved (Goldstein, 1990; Read & Tilley, 2000).

Fifth, whilst the *availability of data and systems* to analyse problems is essential, good analytic systems have been missing, or incompatible with standard analysis software such as Excel, SPSS or R, and data sets have often been found to be incomplete and inaccurate (Scott, 2000; Braga, 2002). Reliance on police data has also been noted in many studies (Bullock *et al*, 2002).

Sixth, *training* is important (Scott, 2006). However, commitment to training has been variable: some police forces provide no training, some for all officers, some for a few officers, and some for not only officers but also for civilian analysts and partners (Read & Tilley, 2000). Linked to training, studies have also drawn attention to officers' lack of knowledge about how best to deal with problems once they have been identified. Many commentators have pointed to the need for bodies of knowledge about how to tackle problems of the sort that officers are routinely called on to address (Townesley, Johnson, & Pease, 2003).

Although there are clear and long-standing challenges to the implementation of problem-solving, it remains the case that evaluations of the approach consistently suggest that it is cost effective in dealing with a huge range of policing problems. The upstream investment in prevention should, if applied consistently across police forces, deliver reductions in demand.

METHODS

The research reported here used mixed methods. These included a cross-sectional online survey, content analysis of documents, semi-structured individual interviews, and a systematic assessment of submissions to the 2018/19 Tilley Award scheme. Quantitative and qualitative data were collected concurrently, rather than sequentially, in the calendar year of 2019. A mixed methods approach was considered appropriate for this study not only to quantify the level and patterns of police problem-solving in England and Wales, but also to better understand the experiences and perspectives of those doing problem-solving, and the context within which problem-solving is being delivered. It also allowed for triangulation, whereby biases that may follow from the use of singular sources of data can be checked and corrected by drawing on several indicators.

This chapter provides details on the data and methods used in this study. It begins by describing how police forces were selected and recruited to take part in this research. It then goes on to discuss in turn the four methods used in this study. In each case, we discuss our process for sampling and data collection. The chapter concludes by acknowledging the limitations in our methods and particularly concerns about the representativeness of the sample.

Sampling frame of police forces

The sampling frame for this research was the forty-three territorial police forces of England and Wales. In agreement with the PSDRP, a recruitment target of twenty police forces was set. This was to comprise two groups, selected using different sampling methods to achieve differing aims:

- The first group comprised eight police forces purposefully selected to ensure adequate representation of forces with different histories of POP (i.e. some with a longstanding commitment to POP and some with little prior involvement) as well as variation in the nature and size of police force areas in England and Wales (i.e. urban/rural and metropolitan/non-metropolitan forces). This group of police forces was not intended to be representative of policing in England and Wales. Rather, they were selected to ensure the inclusion of police forces that had to a greater or lesser extent shown commitment to and support for a problem-solving approach, with a view to identifying those factors that may facilitate or impede the adoption and spread of problem-solving.
- The second group comprised twelve police forces, selected randomly, to produce findings representative of policing in England and Wales more generally.

In all twenty forces, the aim was to administer an online survey to all officers and staff and request access to any problem-solving-relevant documents they may hold. In the eight police forces selected purposefully, the intention was also to conduct a minimum of ten in-depth, semi-structured interviews with police officers and staff knowledgeable about or interested in problem-solving.

Sampling procedure

The procedure for selecting twenty police forces to take part in this study involved two steps.

- The first step related to the eight police forces purposefully selected for this study to represent diversity in commitment to and prior involvement problem-solving, as well as the size and nature of police force areas in England and Wales. This selection was made in consultation with the PSDRP team and informed by recent HMICFRS local force inspections. As alluded to above, while issues of representativeness are critical in research whose principal aim is accurately to represent a wider population (here the police service in England and Wales), more important for this aspect of our research was to identify police forces which are to a greater or lesser extent committed to a problem-solving approach, with a view to identifying those factors that may facilitate or impede the adoption and spread of problem solving.
- Once the eight purposefully selected police forces had been agreed upon, a random number generator was used to select twenty police forces from the sample frame of all forty-three police forces of England and Wales. As is to be expected, the randomly drawn sample of twenty police forces included some forces which had already been identified through purposeful sampling, as described above. In the event, there were three duplicates, giving a total sample of twenty-five police forces (the eight purposefully selected forces alongside the twenty randomly selected forces minus the three duplicates). In order to reach our target sample of 20 forces, five forces were randomly selected to be excluded.

Recruitment of police forces

A formal letter was sent electronically to each police force inviting them to take part in this study. The letter was jointly produced by the authors of this report and South Yorkshire Police. It was sent to the Chief Constable (or equivalent) of selected police forces from the Chief Constable of South Yorkshire Police (Stephen Watson, QPM). The letter outlined the rationale for the study, indicated that it was being carried out under the auspices of the PSDRP, described what participation would mean to the police force and set out certain practical information about the research team, protocols for how data would be stored and used and so on. The letter also requested that a point of contact be selected, who henceforth would act as the link between the respective police force and the research team assuming participation was agreed. More specifically, the point of contact would facilitate the research through organising the distribution of the online survey, collation of problem-solving documents and the identification of potential interviewees. An anonymised version of the recruitment letter is provided in Appendix A.

Nineteen of the twenty police forces approached to take part in this study agreed to do so, including all eight police forces selected purposefully to receive more detailed research attention. One police force, which had been selected at random, declined to take part in the study citing as their reason that they had recently been subject to inspections and that they were therefore focussing their efforts on making suggested changes to improve performance. However, at around the same time that one force declined to take part, another force

currently not included in the sample approached a member of the research team requesting to take part in the research as part of their ongoing efforts to implement problem-solving. This was agreed, thereby taking our final sample to the target level of twenty, although slightly compromising the random force selection process that we had used.

Online anonymous survey

Survey development

The research team developed a survey intended to capture respondents' knowledge of and involvement with problem-solving, as well as any (perceived) obstacles and enablers to the implementation, practice and spread of problem-solving. An early version of the survey was piloted with officers from South Yorkshire Police and members of the PSDRP, leading to minor revisions. The final survey consisted of forty-four questions organised into eight sections:

- Section one comprised the study information sheet and consent form. This included details on the purpose of the study, what the survey entailed and how the data would be stored and used by the research team. Respondents were informed that participation was voluntary and anonymous. Respondents were not offered any incentives for participating in the survey.
- Section two asked respondents to indicate whether they tended to agree or disagree with eighteen statements related to problem-solving, such as, '*most senior officers in my police force actively support problem-solving*'. The order of the statements was randomised for each respondent. Moreover, mindful of concerns about social desirability bias, in which respondents attempt to give the answer they believe the researcher wants them to give, two opposite wordings were used for each statement, with one of the two wordings randomly shown to each respondent. For example, half of respondents were asked if they agreed with the statement: '*problem-solving is relevant to almost every area of policing*' while the remainder were asked if they agreed that '*problem-solving is only relevant to a few areas of policing*'.
- Section three asked respondents to indicate how useful they think problem-solving techniques are in responding to ten police-related issues, decided upon by the authors and ranging from neighbour disputes to road traffic collisions and children missing from home. Response categories were 'very useful', 'somewhat useful', 'a little useful', 'not at all useful' and 'don't know'.
- Section four asked respondents to indicate which sources of information they tended to use when trying to deal with crime and disorder issues, and how frequently. Sources included those internal to the police (such as 999 calls) as well as external evidence repositories (such as the Campbell Collaboration systematic review library)ⁱⁱⁱ. Response categories were 'I use this frequently', 'I use this sometimes', 'I use this rarely', 'I have not used this but I am aware of it' and 'I was not aware of this'.
- Section five was concerned with partnership working. It asked respondents to indicate which groups they typically engage with when dealing with crime and disorder issues, and how frequently. Eleven groups were listed including 'response teams', 'members of the community' and 'researchers from universities or other research organisations'. Response categories were 'often', 'sometimes', 'rarely' and 'never'. This section also included the open-ended question, '*Thinking only about non-police agencies (such as charities,*

universities and the community), what are the main reasons why you rarely or never discuss problems or response options with them?'

- Section six focussed on respondents' experience of doing problem-solving. It began with the question, '*Thinking about the past 12 months, have you been involved in a project which you would describe as an example of problem-solving?*'. Those answering 'yes' were routed to a further six questions concerning details about the most-recent problem-solving project they had undertaken in the past twelve months. Those answering 'no' were routed to three questions probing why they had not been involved in any problem-solving initiatives in the past twelve months.
- Section seven was specific to the PSDRP and asked respondents about their awareness of it and the associated Tilley Award scheme.
- Section eight contained nine questions about the rank, role and background of the respondent.

The estimated completion time for the survey was ten-to-fifteen minutes. The survey administered is presented in Appendix B.

Survey distribution

The survey population was all police officers and staff in the participating police forces. One police force reported being unable to support the online survey (administered via Survey Monkey) and so nineteen forces took part in this aspect of our research. In each remaining force except one, an invitation to take part in the online survey was either emailed to all officers and staff by a senior officer or distributed via an existing intranet news website or email newsletter. In the final force, the invitation was sent to unit commanders who decided whether to distribute it to officers and staff within their units. That force did not respond to requests to identify how many unit commanders had distributed the survey. The survey was anonymous, and so it was not possible for us to verify any of the information provided by respondents. The time-period allowed to complete the survey ranged from two to four weeks across participating forces. A single follow-up reminder was sent to all officers and staff in each force close to the survey end-date.

Survey analysis

All survey data were included in the analysis, with no data excluded. Analysis was performed using R version 3.6.1. Since all the survey questions were optional, the number of respondents answering each question varied – response rates (as a percentage of those responding) are mentioned for each question in the next chapter. For each survey question, a regression model was used to identify whether respondents' answers varied according to their personal characteristics. These models took into account the respondent's gender, whether they had ten or more years of service, whether or not they had a degree or higher qualification, whether they were a police constable, police officer of higher rank or a member of police staff, and whether they were in a response policing, neighbourhood policing or other roles. Where differences between groups are mentioned in the next chapter, these differences are statistically significant (at the $p < 0.05$ level) after controlling for the other characteristics described above. A separate logistic regression model was run for each opinion-based question. p -values were corrected for multiple comparisons using Holm's method.

Survey participants

A total of 4,141 respondents accessed the survey, with 2,621 (63%) continuing to the final questions. Assessment of the proportion of respondents answering each question revealed no discernible patterns or explanations for the attrition in survey responses. Of those respondents who gave their rank, 72% were police officers, including 47% of all respondents who were regular police constables or detective constables. Compared to the police workforce of the surveyed forces, respondents were more likely to be supervisory police officers (i.e. of sergeant rank or above) than police constables, community support officers or police staff. Among respondents who specified their role, 358 said they worked in a neighbourhood role, 453 in response policing and 1,688 in other roles (see Figure 1). No respondent self-identifying as a Chief Officer completed the survey.

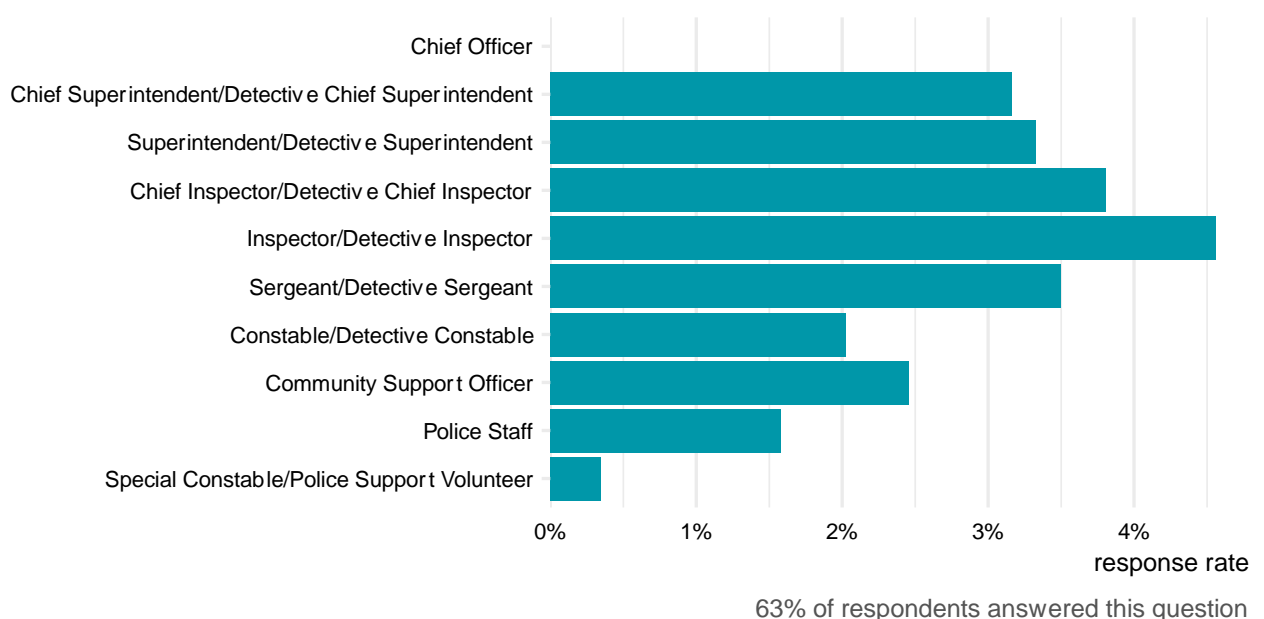


Figure 1 Survey respondents by role, rank or grade (n = 2,621)

Beyond rank or grade, 73% of survey respondents reported having more than 10 years' experience, with only 7% having less than two years' in the service and only 21% being aged under 35. Of those respondents giving an answer, 41% (42% of officers and 37% of staff/volunteers) reported having a bachelor's degree or higher qualification, while 8% reported currently studying for a qualification. Of the respondents who stated their gender, 60% (66% of officers and 45% of staff/volunteers) were male. Thirty-two respondents had entered policing through the Police Now scheme^{iv}, 21 via inspector or superintendent direct entry and 47 via a current or previous fast-track or graduate-entry scheme.

The 4,141 respondents in this survey represent 2.6% of the full-time equivalent regular police officers and 1.5% of police staff/volunteers in the forces involved in the survey^v. This rate is skewed downwards by two factors. First, around 920 respondents did not state which force they work for. Second, the response rate among one of the larger police forces taking part in

this study was comparatively low, but given their large size they accounted for a sizable proportion of all survey invitations sent out as part of this research.

The officers and staff responding to this survey were not representative of the police service as a whole, particularly with respect to their age/length of service and police force. However, limitations on police workforce statistics published by the Home Office mean it is not possible to make further comparisons between the composition of respondents and that of all officers, staff and volunteers.

Document content analysis

Each participating police force was asked to provide corporate documents thought to relate to problem-solving. The type of documents of interest was left deliberately open in the hope of receiving a wide and diverse range of materials. If requested, and in order to assist forces in identifying appropriate documents, a matrix was also provided by the authors that suggested documents that forces may possess which would be considered relevant to this research (see Appendix C).

A total of seventy-seven documents were provided by fourteen police forces. These ranged from guidance documents and crime prevention strategies to training materials and problem-solving plans. All documents supplied by participating police forces were read by two of the authors, with one author coding content according to eight key themes identified in advanced by the authors (listed below) because they are often implicated in the implementation and practice of problem-solving. These were:

- Is problem-solving central within the returned corporate documents? (i.e. does problem-solving underpin police force direction?)
- Does problem-solving have explicit Chief Officer support?
- Is there a process in place for tactical problem-solving (e.g. a problem-solving case management system?)
- Is there a problem-solving guide to instruct operational officers?
- Is a specific problem-solving model endorsed/used?
- Do the available problem-solving materials draw on or make reference to relevant research and theory?
- Is there evidence of wider organisational support to facilitate problem-solving?
- Are the returned documents longstanding or recent (i.e. produced in the last 2 years?)

Semi-structured interviews

Selection and recruitment

In the eight police forces selected purposefully, the nominated point of contact was asked to provide the research team with a list of between ten and fifteen individuals in their organisation who were involved in or knowledgeable about problem-solving, and had the competency to provide an informed view on the subject. No restrictions were placed on the rank or role of identified individuals. For the purposes of this research, these individuals should be understood as 'key informants'. Key informant interviewing is useful for generating

detailed information about a given topic and provide insights that would not be generated by interviewing a more general sample. Key informant interviewing is also useful for research aimed at providing guidance, as was the case here. Participants were able to reflect on their own experiences and perceptions of problem-solving but, by virtue of their expertise, also reflect more broadly on the position of problem-solving within their organisation. The survey described above aimed to correct the evident bias in this self-selected sample of interviewees, and elicit the knowledge, experience and perceptions of officers and staff in police forces more broadly.

Identified individuals were approached via email by a member of the research team inviting them to participate in an interview. Attached to this email was an information sheet and consent form. These forms emphasised that participation in this study was voluntary – even where their respective police force had agreed to take part in the study – that participants had the right to withdraw at any time and without consequence, that anonymity and privacy was assured, and that any and all responses given in interview would not be traceable to particular individuals, departments and/or organisations. Once informed consent had been obtained, the researcher sought to organise a mutually convenient time for interview. Emails were sent to identified individuals a maximum of three times. Failure to receive a response after three attempts meant no further action was taken. Interviews took place either face-to-face on police premises or were conducted via telephone, and with the agreement of the interviewee, were recorded. In each case we strove to accommodate the preferences and availability of participants.

Interview prompts and procedure

The objective of the interviews in this research was to elucidate the experiences and perspectives of an informed group of problem-solving practitioners in England and Wales. To this aim, we opted for a semi-structured interview approach using a set of guiding questions and prompts, designed by the authors and informed by previous research. These prompts were organised into six sections:

- Section one asked respondents to describe their exposure to and involvement in problem-solving.
- Section two asked respondents to discuss examples of problem-solving they have been involved in and the challenges they had encountered.
- Section three probed respondents' attitudes towards problem-solving particularly its relevance to contemporary policing.
- Section four progressed from the personal to the organisational, and asked respondents to discuss how problem-solving was practiced, promoted and valued (or not) in their force.
- Section five explored developments germane to problem-solving, such as the emergence of evidence-based policing.
- Section six asked respondents if there were any other issues considered relevant to problem-solving which had not been touched on in the above questions.

The interview schedule used in this study can be found in Appendix D.

Interview data analysis

Interviews were digitally recorded and fully transcribed. To ensure accuracy, each interview transcript was assessed by the author who conducted the interview. In each case the interviewer was satisfied that the transcript was accurate. An iterative thematic approach was used to identify the major themes in the interview data. This was a staged-process that went as follows: (1) a period of familiarisation which involved two authors independently reading and re-reading all interview transcripts and noting down initial ideas on emerging themes; (2) generating initial codes based on the preliminary set of themes; (3) systematically coding the interview data based on these initial codes and collating data relevant to them; (4) searching for broader themes by collating codes into higher-order topics, and gathering all data relevant to each potential theme; (5) reviewing themes and mapping them across the data sets; (6) ongoing refinement of themes into an overarching narrative or story; and (7) selecting examples and quotations that illustrated the final themes. The codes and themes developed in this study were mainly informed by the literature on POP and the key questions that underpin this research, namely progress in and the extent of problem-solving, attitudes towards problem-solving, and barriers and facilitators to the implementation of police problem-solving.

Analysis of interview data was structured in two ways. First, we analysed the interview data *within* police forces. Themes present within a specific force were thus teased out. A narrative regarding problem-solving and perceived barriers and facilitators within each force was then produced. Second, we analysed the material *between* forces. Again, a narrative reflecting the experiences of the eight forces overall was produced and areas of deviation highlighted.

Interview participants

Across the eight police forces purposefully selected to partake in interviews, we received the names of 118 candidate interviewees. All were contacted by the research team and 85 (72%) consented to be interviewed.

It is important to note that an additional sample of interview participants were also selected using one of two approaches. First, an additional seven individuals were identified through snowball sampling. These tended to be individuals who were identified over the course of the research as being actively involved in problem-solving but who were not affiliated with the eight selected police forces. Second, we also conducted interviews with nineteen individuals associated with the PSDRP. 'Associated' in this sense was understood in one of two ways: those we termed 'programme architects' – individuals involved in conceiving, designing and subsequently being awarded funding for the PSDRP, and those we termed 'programme implementers' – individuals involved in the delivery of the PSDRP. In no cases were they the same people. For all these individuals, the recruitment and interview process was largely the same as that described above, albeit with some tailoring of questions related to the specific role of interviewees. In total, we conducted 111 interviews (78 males, 33 females) with individuals representing fifteen police forces. Table 1 shows the number of interview participants by rank/role.

Table 1 Number of interviewees by role, rank or grade (n = 111)

Role/Rank/Grade	Number of interviewees
Police Community Support Officer	4
Police Constable	10
Sergeant	14
Inspector	18
Chief Inspector	15
Superintendent	7
Chief Superintendent	3
Assistant Chief Constable	1
Deputy Chief Constable	2
Chief Constable	4
Analyst	6
Office of the Police and Crime Commissioner	2
Police staff	16
Other	9

Systematic analysis of the 2018/19 Tilley Award submissions

The Tilley Award was established in 1999 by the (then) Home Office Policing and Reducing Crime Unit (for a detailed history see Bullock, Erol and Tilley (2006)). The purpose of the Tilley Award was to encourage the police and partner agencies to identify and submit projects that exemplified good practice in problem-solving, with the winner being announced at the annual UK Problem-Oriented Partnerships conference. The Tilley Award is the UK equivalent of the International Herman Goldstein Award for Excellence in Problem-Oriented Policing, launched in 1993. The Tilley Award scheme ran continuously from 1999 to 2012. The award scheme ceased to run between 2013 and 2017. It was re-established in 2018/19 as part of the PSDRP.

Before describing how Tilley Award submissions formed part of this study, it is important to acknowledge that problem-solving projects submitted to the Tilley (and Goldstein) Award are not considered to be representative of police and partner problem-solving. On the contrary, such entries are likely to be considered exemplars of best practice by submitting agencies. Systematic analysis of such submissions therefore offers an opportunity to assess what is being delivered in the name of problem-solving at its best. It follows that any weaknesses identified in Tilley Award submissions are also likely to be found, if not amplified, in problem-solving initiatives more generally.

The intention of this study was therefore to undertake a systematic analysis of submissions to the 2018/19 Tilley Award. This method of data collection complements those described above because entries to the Tilley Award were made independent of this study. This source of data are therefore less open to possible participant bias associated with taking part in this study. Similar exercises have been reported previously using entries to the Tilley Award (Bullock, Erol & Tilley, 2006) and Goldstein Award (Clarke, 1997; Scott, 2000; Schnobrich-Davis, Block & Lupacchino, 2018).

The 2018/19 Tilley Award

All seventy-one submissions to the 2018/19 Tilley Award scheme were made available to the research team. Each submission followed a standard template comprising two sections. Section one is a brief overview of the project in no more than 400 words. Section two is a fuller description of the project (up to 4,000 words) organised around the SARA model. The 2018/19 Tilley Award scheme comprised five categories: (1) Business Support and Volunteers, (2) Investigations, (3) Partners, (4) Police Now and Student Officer, and (5) Neighbourhoods.

Table 2 shows the distribution of 2018/19 Tilley Award submissions by organisation. In total twenty-nine organisations were represented. The vast majority were police forces (n = 26), with two submissions from local authorities (Liverpool and Wrexham) and one from the Durham Police and Crime Commissioner's Office. Durham Police accounted for the highest number of submissions (n = 9, 13%), followed by South Yorkshire Police (n = 7, 10%), Avon and Somerset Police and Northumbria Police (n = 5, 7%) and Lancashire and the Met (n = 4, 6%).

Data extraction and codebook

Data were extracted from submissions using a modified version of the codebook developed by Bullock, Erol and Tilley (2006), thereby affording comparisons between 2018/19 Tilley Award entries and their random sample of 150 Tilley Award entries from 1999 to 2005. The modified codebook used here comprised forty-five items organised into seven sections (detailed below). These forty-five items included both factual questions (e.g. what is the title of the project?) and others that required a qualitative judgement on the part of the research team (e.g. is the response tailored to the results of the analyses presented?). The codebook is available from the authors on request.

- *Details of submission* – e.g. title of project; submitting organisation
- *Scanning and project objectives* – e.g. what problem was being addressed? What was the stated objective of the project?
- *Analysis* – e.g. what sources of data/information were used to understand the identified problem? What types of analytical technique were used?
- *Response* – e.g. what was done to try and reduce the problem? Were the chosen responses informed by the analyses reported?
- *Assessment* – e.g. was the outcome of the responses evaluated? If so, in what way?
- *Partners* – e.g. what, if any, partners were involved in the project? If so, in what way?
- *Other* – e.g. Is there any reference to the research literature?

Table 2 Tilley Award entries by organisation in 2018/19 (n = 71)

Submitting Organisation	Number of entries	% of total entries
Durham Police	9	13%
South Yorkshire Police	7	10%
Avon and Somerset Police	5	7%
Northumbria Police	5	7%
Lancashire Police	4	6%
Metropolitan Police	4	6%
Devon and Cornwall Police	3	4%
Essex Police	3	4%
Surrey Police	3	4%
West Yorkshire Police	3	4%
Hertfordshire Police	2	3%
Humberside Police	2	3%
Merseyside Police	2	3%
North Wales Police	2	3%
South Wales Police	2	3%
West Mercia Police	2	3%
Bedfordshire Police	1	1%
Cheshire Police	1	1%
Cumbria Police	1	1%
Dorset Police	1	1%
Durham Police and Crime Commissioner	1	1%
Gloucestershire Police	1	1%
Kent Police	1	1%
Liverpool Council	1	1%
Norfolk Police	1	1%
North Yorkshire Police	1	1%
Warwickshire Police	1	1%
West Midlands Police	1	1%
Wrexham County Council	1	1%

Procedure

The codebook was piloted by two authors on two randomly selected Tilley Award submissions. A high level of consistency was observed on all items. Next, one author read and extracted data on all 71 Tilley Award entries. To ensure consistency, an additional four researchers read and extracted data on between two and nine submissions (15 in total). As with the pilot exercise, interpretations were generally consistent across all items and authors. Analyses of the extracted data were performed in excel.

Limitations

This chapter has described the four different approaches used in this study. Each approach involved the collection and analysis of different kinds of data. Each approach had its own assumptions and sources of bias, as described above. The triangulation of multiple methods to address a single question – what is the state of problem-solving in England and Wales in 2019? – was adopted to minimise biases that would have resulted from using a single source of data, and with it increase the accuracy of our results. Despite our best efforts, we acknowledge that those who took part in this study cannot be considered a representative group from which to make inferences about the use, attitudes and understanding of police problem-solving more generally. In the event, the response rate from the online survey was disappointingly low and because we had to go through police forces to disseminate the online survey, we cannot be certain that it reached all intended respondents. Moreover, amongst survey respondents, many failed to answer all questions. The sample that did respond may not be representative of all police employees and hence results may be biased towards those with knowledge of and enthusiasm for problem-solving. Likewise, those who consented to interview represented a handpicked group of practitioners engaged in and knowledgeable about problem-oriented work. Taken together, we acknowledge that the findings reported here may therefore put problem-solving in an unduly favourable light. Where shortcomings in delivering problem-solving are identified, they will if anything, therefore, underestimate the challenges in making it normal business in police services.

Research ethics

This study was granted ethical approval by the University College London Research Ethics Committee (reference number: 2559/002). Throughout the research, care was taken to maintain the security of data and ensure the anonymity of both individuals and police forces.

RESULTS

This chapter reports the main findings of our research. The data collected using the different methods described above are here integrated and organised into three sections: (1) perspectives on and experience of problem-solving, (2) the problem-solving process and (3) obstacles and enablers of problem-solving.

1. PERSPECTIVES ON AND EXPERIENCE OF PROBLEM-SOLVING

Problem-solving ascending?

Across all police forces included in this study, interview participants talked of a resurgence of interest in problem-solving. How this renewed interest is manifest was found to vary depending on the ‘maturity’ of problem-solving within each force. Participants in forces with less historical involvement in problem-solving described efforts to raise awareness of and skills in problem-solving. Illustrative activities include the creation of problem-solving award schemes and in-force conferences. In police forces with a longer history of problem-solving, and where such activities are already taking place, participants talked mainly of efforts to embed and advance a problem-oriented approach. Interview participants cited two main drivers behind the resurgence of interest in problem-solving, both of which revolve around the effects of austerity over the past decade.

The first driver is the reinvigoration of neighbourhood policing in England and Wales, within which problem-solving is seen as a core responsibility. As one participant put it:

...certainly the last eighteen months we’ve really tried to bring back problem-solving and a problem-oriented approach towards problem-solving through neighbourhood policing and partnership working. [F12: Respondent 1044]

A revival of neighbourhood policing was in turn described as boosting the ability to conduct problem-solving. This revival was mainly attributed to the activities and emphasis of several influential groups and organisations, most notably: (1) the College of Policing’s Modernising Neighbourhood Policing Guidelines, launched in 2018 and supported in its implementation by the National Police Chiefs’ Council’s (NPCC) and PSDRP; (2) the growing emphasis on neighbourhood policing in the inspection process of HMICFRS, and (3) the NPCC crime prevention strategy, within which problem-solving is a key feature. This trickle-down effect from national bodies to local police priorities is illustrated in the following quote:

I think a lot of it [renewed interest in problem-solving] has come from a drive from National Police Chiefs’ Council. You know, they’ve bought into problem-orientated policing massively now, and I think, because of that, then that’s being passed down through the various forces, through the chief constables and the Commissioners’ Offices and what have you. I think that’s probably where the drive has come from over the past couple of years. [F16: Respondent 1002]

The second driver concerns the perceived ineffectiveness of what filled the void created by the demise of neighbourhood policing. Several participants talked of a so-called ‘hybrid’

model established in response to austerity that sought to combine the functions of neighbourhood policing and response policing. In practice, however, most participants conceded that this amounted to little more than a reactive style of policing with minimal community engagement: *“When the financial crunch hit us we stopped Neighbourhood Policing and Response and a lot of the forces then combined them into like a hybrid model; however, this meant that the community aspect got lost because what tended to happen was they would chase demand.”* [F12: Respondent 1044] Moreover, interview participants converged on the opinion that the prevailing response model of policing, in light of depleted resources as a consequence of austerity, was unable to effectively deal with current levels of demand for police services. Put pithily by one participant: *“The operating model was completely screwed, and they had divested all neighbourhood policing. It was just a big reactive bubble of inefficiency and ineffectiveness.”* [F13: Respondent 2051]

The penetration and position of problem-solving

Interview participants were asked whether problem-solving was more apparent in some areas of police business than others. Universally participants suggested that contemporary problem-solving is strongly associated with and mainly practiced by neighbourhood policing teams: *“I think it’s [problem-solving] still quite perceived mainly as a neighbourhood policing activity.”* [F14: Respondent 1062] Some interview participants went so far as to suggest that problem-solving is *only* carried out by neighbourhood teams: *“As far as I know, I don’t think there are any POP plans that are owned outside of neighbourhoods.”* [F13: Respondent 1050]

A similar trend was apparent in other sources of data collected in this study. For example, among the documents supplied by participating forces, the majority framed problem-solving as a component of neighbourhood policing. Moreover, analysis of Tilley Award entries found that of the five categories of award – ‘Neighbourhoods’, ‘Police Now’, ‘Investigations’, ‘Partners and Business Support/Volunteers’ - the majority of submissions were self-categorised as ‘Neighbourhoods’ (n = 56) (Table 3).

Table 3 Self-selected category of 2018/19 Tilley Award entries (n = 71)

Category of submission	Number of submissions	% of submissions
Neighbourhoods	56	79%
Partners	44	62%
Police Now	13	18%
Business Support and Volunteers	11	16%
Investigations	6	9%

*note that applicants could select more than one category, thus, the total exceeds 71.

The tendency for problem-solving to concentrate in neighbourhood policing was observed in all forces taking part in this study, including those with a longer history of delivering a problem-solving approach. Interview participants cited three main reasons for this. First, is the widely-held belief that problem-solving is an expected function of neighbourhood

policing, more so than in other areas of policing. As one neighbourhood police officer remarked: *“I think it will be more concentrated in the neighbourhoods because that’s our role, to identify problems... and then problem-solving, whilst the CID [Criminal Investigation Department] are generally involved in investigations and serious crime.”* [F17: Respondent 1011]

Second, is the greater amounts of time typically found in neighbourhood policing roles (as opposed to, say, response) to devote to longer-term problem-solving, this being a function of not (generally) having to respond to emergencies:

[Problem-solving is] more prominent in neighbourhood policing because inevitably response is going in and they're dealing in emergencies, they're dealing with the immediacy of stuff. Traditionally, and still the case, neighbourhood officers have more time ... they've got more time to work on it longer-term. They're not having to dash off to the next blue lights or they're not having to dash off to the next 999 as much. That's why it ends up sitting there because problem-solving as you know, it's slow time work often. It's over a few weeks or months that you actually implement a POP plan. [F17: Respondent 1019]

The third reason is the greater proximity to the community afforded by neighbourhood policing and thus a greater ability to identify or be made aware of community-related issues:

I would say neighbourhoods believe in it [problem-solving] because they get the opportunity to do it. It's kind of hardwired into the role profile. They tend to understand it a little bit better, and because they're working with communities day in, day out, they understand that going time and time again is just not going to work and you have to think a little bit differently. [F18: Respondent 1020]

Although participants overwhelmingly agreed that problem-solving is more readily observed in neighbourhood policing, there was also widespread acknowledgement that problem-solving should not and need not be limited to this area of policing - the utility of problem-solving across a broad spectrum of police business was emphasised. As one interviewee remarked:

It's not just a responsibility of the neighbourhoods to do problem-solving... everyone deals with a crime and disorder issue that needs to be problem-solved or managed. So, I don't think it's the responsibility of one group. [F17: Respondent 1011]

Moreover, several participants suggested that problem-solving is applicable to a wide range of crime types including those more serious offences that typically fall outside of the remit of neighbourhood policing. As one interviewee suggested:

You can apply problem-solving techniques to absolutely anything, ... counterterrorism, yeah, organised crime, drug trafficking, whatever it is, I think you could work through that. Some problems are obviously bigger than others, but using the methods and the same approach. [F17: Respondent 1012]

Despite neighbourhood policing being identified as the main vehicle through which contemporary problem-solving is being delivered, participants also stressed that it is not the case that *all* neighbourhood officers are routinely problem-solving. Many interview participants described how depletion in resources due to austerity post-2010 has meant the continual abstraction of neighbourhood policing teams to fulfill response roles, as illustrated below:

We are regularly pulled away from neighbourhood to response because response is so short. So the reality is maybe we're not given the time that we actually need to solve these problems because we're constantly being pulled back onto response to answer calls. [F16: Respondent 1001]

Shortages of time and resources, as well as differences in emphasis and expectation, were also mentioned by interview participants when discussing the challenges of introducing problem-solving into other areas of police business. These discussions centred on two parts of the police service in particular – response and investigations. In each case consensus emerged that problem-solving was less apparent but that officers occupying such roles had much to contribute to and benefit from problem-oriented ways of working. In relation to response roles, for example, these sentiments are illustrated in the following two quotes: *“I would say in response, less than 30 percent are sold on problem-solving. I think they would say, “I believe in it, don’t get me wrong, I believe in it, but I just can’t do it, I’m too busy.” [F18: Respondent 1020]* And: *“Response officers have got to realise that they’ve got to be part of it, if it’s to save them as well, isn’t it? They get as frustrated as we do with demand calls to them, you know?” [F16: Respondent 1010]* Likewise for detectives: *“I don’t think that detectives necessarily see problem-solving as part of their role. ... problem-solving still is linked culturally in peoples’ minds with neighbourhood policing rather than with all aspects of policing” [F13: Respondent 1056]* and:

It’s almost a social scientist role, the detective, isn’t it? You go there and you look at what you’ve got, and then you hypothesise about what happened and then try and build the evidence to support your hypothesis. So, I think they make excellent problem-solvers. [F17: Respondent 1013]

Embedding problem-solving in all areas of police business was identified by many interview participants as an aspiration but also a significant challenge, even in police forces with a long-history of problem-solving. This is evident in the two responses below when participants were asked to consider whether problem-solving is fully embedded in their organisations:

There are enough people who believe in it in the organisation to keep driving it forward, but embedding it across the piste ...My honest answer is no, I don’t think we’ve truly embedded it to that level. But are we comparable ... to other forces? Absolutely, we are. But that holy grail of every single person espousing all the virtues of problem-solving, we’re not there yet. [F18: Respondent 1020]

Do we have somebody who’s leading on problem-solving that really believes that problem-solving is the way forward, yes, definitely. However, making that a reality, making it day to day business, changing the culture of the organisation, giving people

the time to understand and find those solutions and deliver those solutions, that's where the challenges lie. There's a will but the reality of what we're dealing with and the day-to-day basis just make it very difficult to deliver that will. [F17: Respondent 1017]

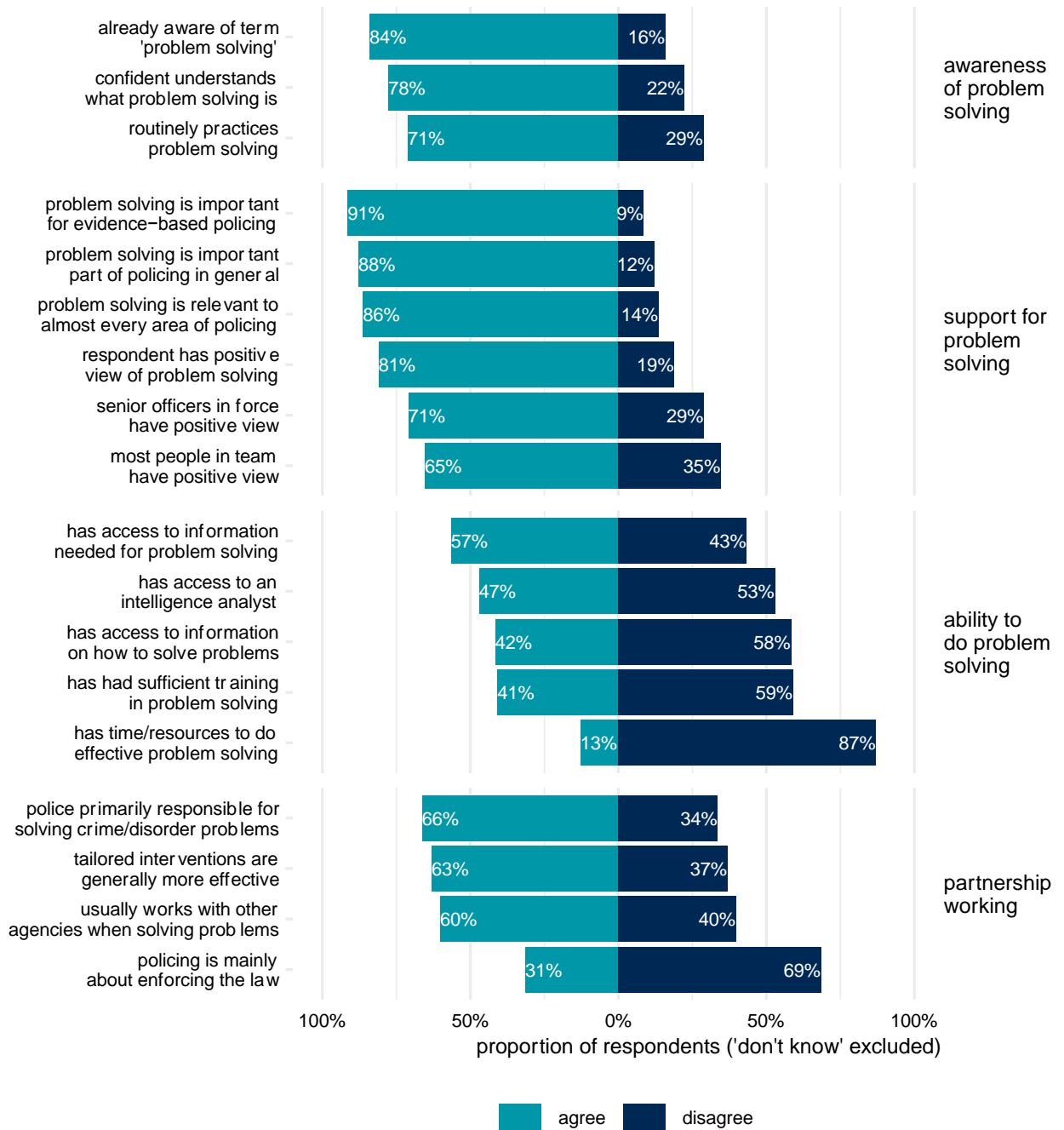
Awareness, attitude and use of problem-solving

Almost all survey respondents (84% of those who answered these questions) stated they had been aware of the term 'problem-solving' before starting the online survey, with a similar proportion (78%) stating that they were confident that they understood what problem-solving involves (see Figure 2). No meaningful differences were observed in levels of awareness of problem-solving across respondent characteristics (gender, length of service, rank, role etc.).

Widespread awareness of problem-solving says little about practitioners' attitudes toward it. In relation to the latter, 81% of respondents said they personally had a positive view of problem-solving, although constables were less likely to hold such views compared to supervisory officers or police staff. Moreover, survey respondents overwhelmingly agreed that problem-solving is both "*an important part of policing in general*" (88% agreed) and "*relevant to almost every area of policing*" (86% agreed). Supervisory officers were more likely than others to agree with this statement (87% agreed) and response officers more likely to disagree (78% agreed).

Survey respondents were also asked about wider organisational support for problem-solving. In response, 65% of participants believed that the other people in their team held a positive view of problem-solving. Response officers were significantly less likely to agree to this statement than respondents in other roles. Moreover, 71% of respondents said that most senior officers in their force "*actively support problem-solving*".

The next survey question asked whether respondents had been involved in a project which they considered to be an example of problem-solving in the past twelve months. 71% of respondents answered this question, of which 1,329 (45%) said "yes", including at least one respondent from each of the nineteen police forces taking part in the survey. Self-reported involvement in problem-solving was found to vary considerably by role, however. For example, 75% of those in neighbourhood roles reported being involved in a problem-solving project in the past year compared to 21% of those in response roles.



86% of respondents answered these questions

Figure 2 Survey respondents agreement with problem-solving relevant statements (n = 3,561)

2. THE PROBLEM-SOLVING PROCESS

The results presented so far relate to the perceptions, prevalence and penetration of police problem-solving in England and Wales. This section is concerned with the problem-solving process, and its application in practice.

Models for problem-solving

SARA was identified by interviewees as the dominant model for doing problem-solving. It was praised for its simplicity, common-sense appeal and because it provided a structure to both work through and document problem-solving projects. Examples were also found of the use of OSARA, an extension of SARA in which O refers to the 'objective' of a problem-solving initiative. Indeed, of the fourteen internal guidance documents made available to the research team, seven endorsed SARA and seven endorsed OSARA. Some interview participants described a recent shift from SARA to OSARA as the main process model:

Historically we had some really good partnership working arrangements and had a good understanding of SARA ... and then that kind of disappeared with austerity. That's now come back. We're having a big focus on [problem-solving] – we use the model now called OSARA, you know, setting the objective first of what it is we're trying to seek to achieve and work with partners to try and resolve them. [F17: Respondent 1012]

Whilst the SARA categories were explained consistently across force documents there was inconsistency in how the 'objective' in OSARA was conceived and recommendations for its use. In some returned documents, for example, it was emphasised that objectives be specified in advance of scanning. In others it was suggested that the objectives be specified on completion of problem analysis. Moreover, in some of the documents that stated that objectives be established from the outset, practitioners were encouraged to use SMART principles (Specific, Measurable, Achievable, Relevant, Timely) in setting out project objectives, albeit it is unclear how these criteria could be specified prior to the completion of scanning and analysis.

Deviations from (O)SARA were infrequent. One interview participant described how their force is experimenting with Ratcliffe's (2018) PANDA model (problem, analyse, nominate, deploy, assess) in part to overcome a perceived unhelpful overfamiliarity with SARA:

It was very much experimental. So I was just a bit curious to be honest, see how it worked... we've almost become a little bit good at playing the game of SARA, in that we do the scanning and analysis quite quickly, we tend to or historically we've put most of our time into doing the response phase because that's the bit we're most comfortable with. PANDA seemed like an opportunity.. ... and it might even be as simple as the fact that you've changed the acronyms that you're using.... it might get people to think a little bit more about the stages that they were doing because it didn't fit quite so neatly into the boxes that maybe they have already thought about, if that makes sense. [F20: Respondent 2045]

Another interviewee described their force's decision to use the National Decision-making Model (NDM) because of recurrent inconsistencies in the way that SARA was being applied in practice:

One of the things that HMIC rightly picked up on is that when they were going out and asking people about what's a problem-solving framework in [police force] there was inconsistency ... some people mentioned SARA, some people didn't really know, some people might have mentioned another girl's name but it was that kind of inconsistency.... So we decided to ... move to the NDM for our framework because all officers know the NDM, when you read NDM it says exactly the same as SARA but in a different terminology, it's a framework, it's a process management tool. To try and remove that inconsistency. [F21: Respondent 2050]

Problems for problem-solving

Survey respondents who reported having been involved in problem-solving in the past 12 months were asked to describe the problem they had focused on (n = 1,075). Respondents provided free-text answers which were manually coded by the research team. Most common among the identified problems was anti-social behavior (ASB), mentioned in 23% of cases. The second most common category of problem mentioned by survey respondents is defined here as 'internal police issues' (11% of cases), examples of which ranged from projects to improve the quality of case files to the implementation of new computer systems. Several such projects revolved around improving the quality of problem-solving itself. Public protection issues such as domestic abuse and child protection (8% of cases) emerged as the third most common category of problem-types.

Analysis of the 2018/19 Tilley Award entries provided another means to determine the types of problems selected for problem-solving. These are presented in Table 4. Three features warrant mention. First is the striking diversity of problems selected for attention. The list of problems includes both crime and non-crime related issues as well as projects seeking to reduce all crime and disorder in a particular geographical area or victimisation among a particular group of people (e.g. students). Second, ASB is again the most frequently targeted problem using a problem-solving approach, making up just over a quarter of Tilley Award submissions, either as the sole focus or as part of a wider focus in a specific area. And third, it is noteworthy that relatively few submitted projects targeted contemporary police priorities such as cyber-crime (n = 3), county lines (n = 1), human trafficking/modern slavery (n = 1) and knife crime (n = 1).

Table 4: Problems addressed in 2018/19 Tilley Award entries (n = 71)

Problem	Number of submissions	Percentage of submissions
Anti-social behaviour	9	13%
Crime and ASB at a specific hotspot	9	13%
High impact users/high impact generators	6	8%
Child Sexual Exploitation	5	7%
Internal processes/systems	4	6%
Missing persons	4	6%
Organised Crime Groups /Gangs	4	6%
Cyber crime	3	4%
Vehicle crime	3	4%
Begging	2	3%
Drug use	2	3%
Fraud	2	3%
Retail crime	2	3%
Arson	1	1%
Burglary	1	1%
County lines	1	1%
Cuckooing	1	1%
Distraction theft	1	1%
Domestic abuse	1	1%
Drowning	1	1%
Drunk and disorderly	1	1%
Early intervention/ACEs	1	1%
Hate crime	1	1%
Human trafficking/modern slavery	1	1%
Knife crime	1	1%
(Crimes against) Students	1	1%
Poaching	1	1%
Traffic	1	1%
Youth crime	1	1%

Partners in problem-solving

Partnership working was found to be a common feature of the problem-solving initiatives identified in this study. Although not representative of problem-solving work more generally, all but one of the 71 submissions to the 2018/19 Tilley Award involved multiple partners. The submission without external partners focused upon internal police issues.

Partnership working was also raised by many interview participants as being important to the delivery of successful problem-solving. This was usually expressed in terms of the police not being able to change many of the issues that underpin recurring problems. As one interviewee



put it: “Well, I mean, it depends on the problem and non-police organisations are essential to many of the problems that we deal with. If we need to get to that underlying societal change, it’s not going to be undertaken by the police.” [F17: Respondent 1017] And for another: “For me personally, I think it’s sharing out that responsibility to other agencies. That’s a massive way that we reduce that demand. So, as I said right at the start, we’re not always the most appropriate agency to deal with the particular problem.” [F16: Respondent 1002] This meant that officers were reliant on partners to address problems.

Beyond responsibility for and competency to deal with presenting problems, interviewees also drew attention to the extra resources and knowledge that partners may bring to the problem-solving process:

I think we very much need to recognise that as a single agency we just cannot deal with these issues adequately, we’ve just got to come together as partners and work together as a team and resolve them, that way because everybody has their own contribution that they can make which is unique to that partner and without bringing everybody together and making sure that we have that multi-agency approach, I don’t think we can ever properly problem-solve without that. [F17: Respondent 1014]

To this end, some interview participants described close and fruitful relationships with partners – including working in embedded teams in some cases:

That’s been embedded for some time, to be fair. That isn’t one of the areas that I think is a huge area for development. For us, it’s kind of part and parcel of daily business, in terms of working with partners. We’ve got some of our staff embedded with local councils as well, as well as the expectation of regular joint action groups with the right partners sitting round the table. [F15: Respondent 1078]

However, good partner relationships were not universal among interview participants. Some described major difficulties in securing partner engagement in problem-solving: “The big challenge I have certainly at my level now is trying to encourage our partners to think in the same way. That is still a real, real issue”. [F18: Respondent 1020] Several themes were evident. Circumstances played a role – where the problem was seen to be a shared problem, partnership working to resolve it was considered to be more likely. To illustrate:

I’ve always found from my experience of working within the partnership world is that if you’re trying to deal with something that there’s a common goal, common interest there you’ll get them on board; if it’s something we’re trying to push as the police but it’s not really a priority for them then you’re sometimes struggling because you don’t get the buy in from them then that becomes a big uphill battle to try and achieve that. [F19: Respondent 1041]

Similarly, interview participants drew attention to how agencies had different day-to-day priorities which can affect willingness to engage:

In regard to partnership working, we can get a little bit of like talking to a brick wall sometimes. And generally, it’s around communication and correspondence with emails



between partners, they're not particularly great at always communicating what they're doing on their side, although they should be telling us for our documentation, really. But I don't know. Obviously, everyone has got their own workload and they have obviously got to prioritise what they're doing day-to-day. But just a bit of an update on what they're doing would be great. [F15: Respondent 1072]

Occasionally interview participants described how austerity had *promoted* partnership working. As one interviewee noted: *"Because it's not just the police that have had cuts, the council have, the health service in different departments, they've all faced cuts and there's still more to come, so you've got to work smarter and work more effectively."* [F17: Respondent 1012] However, more commonly budget cuts were thought to have reduced partnership working. Put succinctly, *"Everyone went into silos when austerity kicked in."* [F14: Respondent 1067] More broadly, it was felt that austerity left fewer resources available to implement responses to identified problems:

In public services, we are running the risk of growing apart, because all of our funding is reduced, which, for me, makes problem-solving all the more important. So, have we got areas where we get frustrated that partners aren't getting involved? Yes, yes, absolutely. It's a resource issue, you know? So, where we know a tactic works, and another partner ... it might be something as simple as boarding up, or painting windows on boards ... we've got things that we know might work, but we're dependent on a partner to do it, then often, they can't do it, won't do it, don't understand why. [F18: Respondent 1030]

Finally, organisations were thought to be differently willing to engage in problem-solving: *"we do work closer with some agencies more than others."* [F16: Respondent 1006] For another: *"I think the private sector at times has been hard to work with, at times been really supportive."* [F20: Respondent 1038]. For a third participant:

It's a real mixed bag, I think. ...so one of our obviously critical partners would be local authority [...] but there are some real headaches about getting the right people around the table that I see, and again in terms of my job, this is probably what my problem-solving focus is, to try and unblock the multiagency world a bit more. [F18: Respondent 1031]

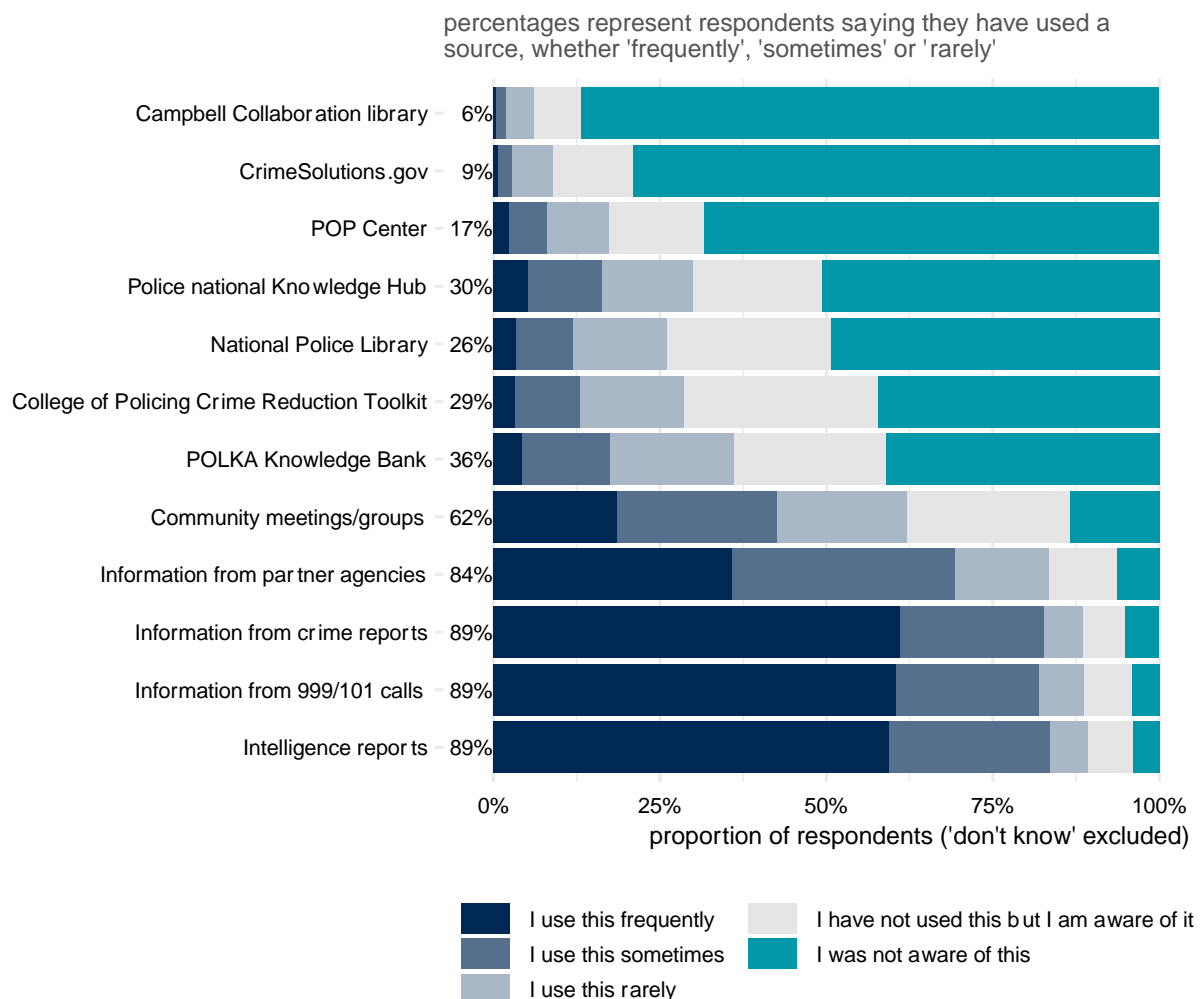
Sources of information

This section is concerned with the sources of information drawn on when problem-solving, in particular those sources of information that are external to the police. Survey respondents were asked to indicate the sources of information they tend to use to understand a problem or to choose responses. As shown in Figure 3, respondents were much more likely to have used sources of information internal to the police than external sources. Among internal information sources, 89% of respondents said they have used information from 999/101 calls, crime records and intelligence reports when understanding a problem or choosing responses, with most saying they do so frequently.

Information from partner agencies had been used by 84% of respondents (although only 36% said they use such information frequently), with survey respondents working in

neighbourhood roles being much more likely to have done so than other respondents. Neighbourhood officers and staff were also much more likely to use information from community meetings or groups, with 82% saying they used such information frequently or sometimes, compared to only 23% of respondents working in response policing.

Few other sources of information were routinely used by survey respondents. For example, fewer than 10% of respondents made frequent use of the POLKA Knowledge Bank, COP Crime Reduction Toolkit and the Knowledge Hub. However, a majority of survey respondents said they had heard of these sources even if they had not used them. The majority of respondents had not heard of the remaining three sources of information that they were asked about (POPCenter.org, CrimeSolutions.gov and the Campbell Collaboration library of systematic reviews). Usage of the Crime Reduction Toolkit, POLKA Knowledge Bank, POPCenter.org and the Knowledge Hub was higher among supervisory officers and those working in neighbourhood roles. However, in relation to almost all research-based sources, less than a quarter of respondents, even those in supervisory or neighbourhood roles, frequently or sometimes made use of them.



74% of respondents answered these questions

Figure 3 Sources of information drawn on when problem-solving (n = 3,064)

Survey respondents were also asked which other teams or partners they would typically discuss problems or response options with. Figure 4 shows that only a minority of survey respondents said that they often discussed problems with other police teams or partners. Neighbourhood teams (often consulted by 48% of respondents) were identified as the group most likely to be consulted. Fewer than a quarter of respondents said they often discuss problems with intelligence analysts (21% of respondents) or crime prevention officers (15%), with more than a quarter saying they had never consulted a crime prevention officer about a problem.

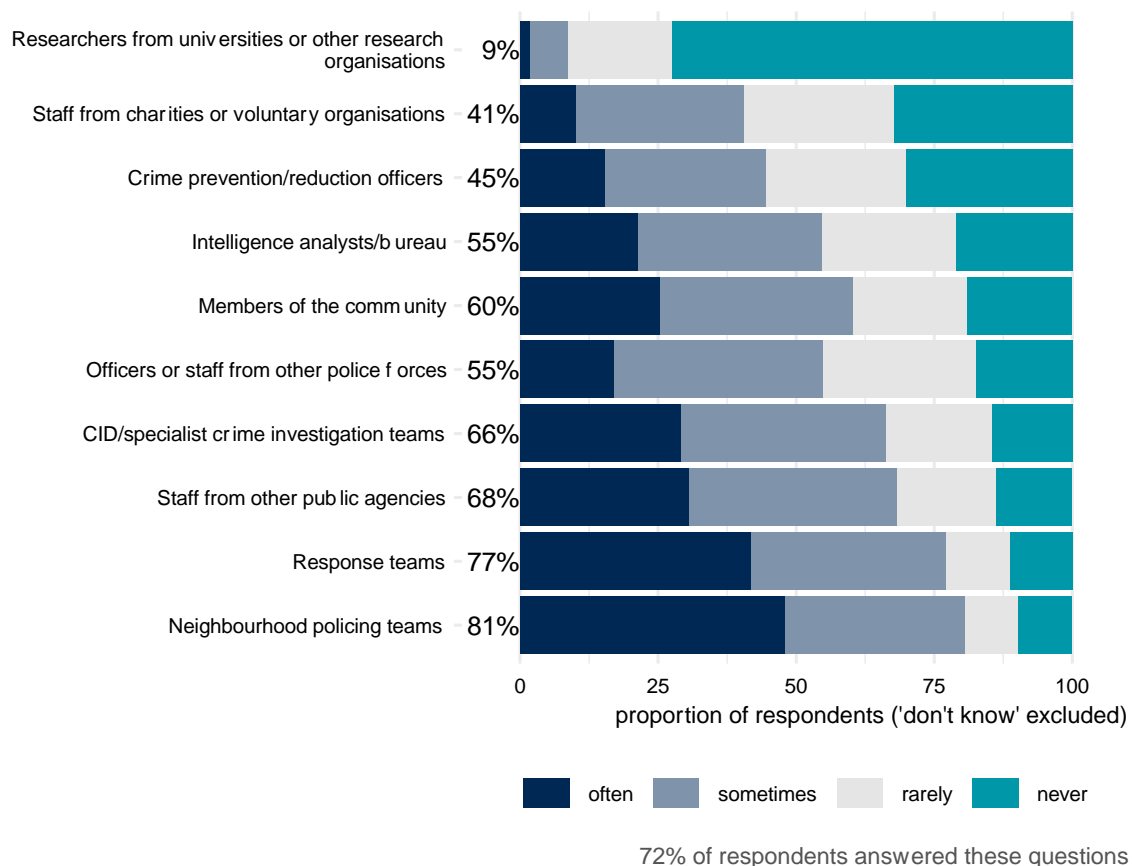


Figure 4 Partners and organisations consulted when problem-solving (n = 2,981)

Only 2% of survey respondents said they often discussed problems with researchers from universities or other research organisations, with 73% saying they had never done so. Survey respondents who reported they had recently been involved in problem-solving but never or rarely discussed problems with researchers were prompted to give reasons for this in their own words. Common reasons given included (1) a lack of time, either due to the demands of police work or because survey respondents perceived the pace of academic research to be misaligned with that of frontline policing; (2) not knowing if and how researchers could help in problem-solving; (3) concerns that information on policing problems could not be shared

with researchers for reasons of data protection or operational security, and (4) feeling that liaising with external researchers was not part of their role.

Despite the apparent infrequency with which survey respondents reported working with researchers when problem-solving, it is worth noting that several interview participants lamented the lack of collaboration between the police and academia. As one put it: *“I just think there needs to be more academic rigour to what we do and more kind of work with the universities.”* [F13: Respondent 1050]. Moreover, a small number of interview participants reported current or previous academic qualifications being funded by their police force.

SARA: perceived challenges in application

Despite the popularity of SARA as the model for doing problem-solving, interview participants drew attention to two main challenges when applying SARA in practice. The first concerns problem analysis. Interview participants described how this element of problem-solving was often weak or overlooked as a result of jumping directly to response development:

Of course, let’s also be clear, most problem-solving fails because people don’t understand the problem in the first place. Because you’re often dealing with the symptoms of something else and so people try and address the symptoms rather than what the actual cause is. [F13: Respondent 1057].

Two main reasons were given for recurrent deficits in problem analysis. First, is a shortage of skills to carry out adequate analysis (also see page 47). As one participant said:

Analysis is one of the hardest elements, that’s quite a specialist skill, and we don’t have a great deal of that. We’re starting to take analysts on, but they’re working within our intelligence units and they’ve got a very specific portfolio, so you can’t just task them to say could you look at this for me and what have you. So you’ve got to find people that have an understanding of some analytical skill that they can look and look deeper and understand how it works. So that’s probably the biggest stumbling block is that analysis and people understanding how to research, how to look at all the possible options. [F19: Respondent 1039]

Second, is a ‘police culture’ in which action trumps scrupulous analysis. As one interviewee put it: *“it’s always a problem with policing we tend to just jump in and crack on.”* [F13: Respondent 1059]

Failure to conduct adequate analysis was cited as a reason why some problem-solving initiatives produce limited or no effects. This being because where problems are poorly understood, responses risk being misjudged or poorly targeted:

What we seem to have now is a situation where we’re looking to go from that understanding to some form of intervention very, very quickly. ... In many cases I don’t believe it takes us to the right interventions and the right problem-solving strategies. That’s highly problematic because then you’re doing stuff but potentially the stuff that

you're doing is not relevant or won't impact on the problem that you're trying to solve in the first place. [F17: Respondent 1017]

The assessment of implemented responses was likewise identified by interview participants as a major challenge in problem-solving. Many spoke of assessment being omitted or done superficially:

...lip service is paid to stuff. I mean, I can show you that nobody ever does any assessment so we don't know how it all works. ...I could have shown you hundreds of POP plans and every single one of them would have been blank for assessment. the cops are activists, they want to do stuff - they don't want to do the frontloading thinking and they don't, they just want to go out and run around and do stuff and they don't want to think about what they've done afterwards and I think that's why we're so inefficient in our productivity is so low because we're discouraged from thinking, we're told to do, if you sit through our DMM [daily management meeting] every morning, you'd see that, it is action first, thinking second. We're all, I'm guilty of it. [F13: Respondent 1051]

SARA as used in Tilley Award entries

The previous section described what study participants identified as some of the main challenges in doing problem-solving using the SARA model. In an effort to flesh out some of these challenges using an alternative data source, we turn now to an assessment of the different phases of SARA as documented in entries to the 2018/19 Tilley Award scheme.

Scanning

Scanning, as described previously, is concerned with the identification and definition of problems, understood here to mean similar, related or recurring incidents that the police are expected to handle. Table 5 shows how selected problems were reportedly identified in entries to the Tilley Award. It shows that in just under half of all submissions, problems were identified through the use of police data (both recorded crime and calls for service data, 45%). The second most common source of problem identification was through observations by the police (21%) followed by problems being raised by members of the community (18%). In the majority of entries (70%), the presenting problem was reported to have been identified using a single data or information source.

Table 5: Methods for problem identification in 2018/19 Tilley Award entries (n = 71)

Source	Number of submissions	Percentage of submissions
Police data	32	45%
Identified by police officer/staff	15	21%
Community	13	18%
Partners	10	14%
Following a major incident	8	11%
Elected officials	5	7%
Resource issues/austerity/cuts	4	6%
National/local priorities	4	6%
Businesses	4	6%
Social media/media	3	4%
Serious Case Review	2	3%
Other	3	3%

*note that some applicants used multiple methods, thus, the total exceeds 100%.

Problem-solving usually entails setting geographical boundaries on the scope and coverage of a presenting problem. Table 6 shows the scale of selected problems reported in Tilley Award entries. Many projects were targeted at ‘police defined’ areas, such as particular police districts or divisions (41%) or the entire police force area (21%). By contrast, other projects focused on problems associated with rather specific well-defined locations such as particular locations, properties or individuals (21%). Specific Neighbourhoods – including estates, town centre locations or a collection of streets were selected in 17% of entries.

Table 6: Geographical coverage of 2018/19 Tilley Award entries (n = 71)

Geographical area of intervention(s)	Number of submissions	Percentage of submissions
District/Division/Borough/BCU/Ward/City/Town	29	41%
Police Force Area	15	21%
Specific Location/Property/Individual	15	21%
Specific Neighbourhood	12	17%

Analysis

Our interest here focusses on two aspects of problem analysis: (1) the types of data and information sources used in problem analysis and (2) the techniques used in problem analysis. Table 7 lists the sources of data most commonly drawn on in Tilley Award submissions. As expected, by far the most commonly used source were police systems (used in 82% of submissions), followed some way behind by findings from community/resident surveys (28% of submissions). This bears some similarities to Bullock et al. (2006) who found that that the most common source of data was police crime/incident records (55%). Unlike Bullock et al. (2006), who found that relatively few data sources were used, with very little from local authorities, health or other emergency services, the 2018/19 sample includes a larger variety

of data sources with 11% of submissions using local authority data, 11% drawing on data from local businesses and 10% using health data. Only 17 of the 71 (24%) submissions relied on a single data source when analysing the selected problem, and the majority of entries that did so focussed on internal police problems.

Considerable variation was apparent in the type and quality of problem analysis presented in Tilley Award entries. Whilst some projects reported comprehensive and often complex problem analysis, drawing on tools such as crime scripts and the near repeat calculator, in other entries it was difficult to decipher what analysis had been conducted and for what reason. In 10% of entries there was no analysis at all, double that found in previous assessment of Tilley Award submissions (Bullock *et al.* 2006). Those projects where this was most pronounced were those focussed on ‘internal police issues’.

Table 7: Data sources commonly used in 2018/19 Tilley Award entries (n = 71) ^{vi}

Data source	Number of submissions	Percentage of submissions
Police crime/incident data	58	82%
Community/residents feedback/surveys	20	28%
Intelligence reports	8	11%
Business data	8	11%
Local authority data	8	11%
Health data	7	10%
Review of policies/processes	5	7%
CCTV	5	7%
Victim/families of victims feedback	4	6%
Housing data	3	4%
Drug and alcohol data	3	4%

*note that some applicants used multiple sources of data, thus, the total exceeds 100%.

In terms of the kinds of analysis that was conducted, approaching half of all projects (42%) presented simple counts of the presenting problem. In just over a third of projects (35%) basic descriptive information on offenders was provided. Analysis of the crime location, without mapping, was included in 30% of submissions, and analysis of victim characteristics was included in 21%. A single method of analysis was reported in just over a half of all submissions (54%).

Thirty-one (44%) entries reported difficulties with data. These covered (in descending order), issues with data sharing (n = 12), problems of under-reporting (n = 12) difficulties in quantifying the extent of the problem (n = 5) and ICT deficiencies, generally related to partners using different IT systems that, in some cases, were not compatible (n = 2).

Response

Table 8 lists the categories of responses reported in Tilley Award entries. It shows that the most common response was enforcement-related, present in just under half of all submissions. This is consistent with prior research from the UK and US, where enforcement

was also identified as the most common response type reported in 57% (Bullock *et al.* 2006) and 75% (Schnobrich-Davis *et al.* 2018) of submissions to the Tilley and Goldstein Award, respectively. The second most common response is broadly defined as engagement, used here to refer to projects which typically involved the police working with, say, young people and community groups as a means of addressing a presenting problem. The introduction of security measures and redesigning the physical environment was the third most popular response. For 64 of the 71 Tilley Award submissions (90%), we judged the response to be tailored to the findings of the analysis. Only 5 (7%) of the submissions presented responses that did not appear to be tailored to the analysis reported, comparable to the findings of prior research (Bullock *et al.*, 2006).

Table 8: Responses reported in 2018/19 Tilley Award entries (n = 71)

Intervention category	Number of submissions	Percentage of submissions
Enforcement	35	49%
Engagement	26	37%
Situational crime prevention	24	34%
Organisational development ^{vii}	18	25%
Education	17	24%
Treatment	12	17%
Training	3	4%

*note that some applicants used multiple responses, thus, the total exceeds 100%.

Assessment

As indicated previously, assessment is widely viewed to be one of the most challenging aspects of the problem-solving process. Among the assessed Tilley Award submissions, nineteen (27%) entries did not report any kind of formal impact evaluation. Of those that did, over two-thirds used a pre/post design to assess the impact of selected responses (n = 48, 68%). Three entries used an RCT (4%). Displacement and diffusion of crime control benefits was measured in eleven submissions (16%) and some form of cost-benefit analyses was presented in fourteen entries (20%).

Finally, the authors of this report judged whether the conclusions drawn from the assessments presented in Tilley Award submissions were appropriate. It was determined that in most cases (n = 57, 80%), the evaluation conclusions were convincing or somewhat convincing. In thirteen entries (18%) the conclusions drawn were deemed to be unsuitable based on the results reported.

3. BARRIERS AND ENABLERS TO PROBLEM-SOLVING

This final results section considers the barriers and enablers to problem-solving.

Survey respondents were asked to agree or disagree with a series of statements concerning their ability to carry out problem-solving. Despite the abovementioned high personal support for problem-solving, most survey respondents indicated various obstacles to doing problem-solving. For example:

- *Training:* Around two-thirds of respondents (59%) disagreed with the statement that they had received sufficient training in problem-solving.
- *Analysis:* Just over half of respondents (53%) said their team did not have access to an intelligence analyst to support their work.
- *Information sources:* 43% of respondents said they did not have access to information on how to solve problems.
- *Time and resources:* Only 13% of respondents agreed that they had the time and resources to do effective problem-solving.

In addition to agreeing or disagreeing with a select number of statements, survey respondents who reported some involvement in problem-solving were also asked to list what they viewed to be the main barriers to practicing problem-solving in their force ($n = 1,129$). Responses were given as free-text answers which were then manually coded and categorised. The most frequently identified barrier to problem-solving was a lack of time and/or resources dedicated to problem-solving (54%). This was followed (in descending order) by a lack of co-operation and engagement from partners (15%), a lack of training on and/or understanding of problem-solving (9%), a lack of analytical capacity or information sharing (9%), the culture of the police (8%) and a lack of senior support for problem-solving (6%).

The barriers to problem-solving identified by interview participants closely aligned with those cited by survey respondents. For example, many interviewees identified time and resources as factors determining whether individuals practice problem-solving. As one participant put it:

If they're dealing with jobs... You know, if you've got that constant beck and call of the radio and you're not having the opportunity to look at your workload that comes in through the system you're not going to get that time to put into problem-solving. [F12: Respondent 1048].

Likewise, with respect to training, most interview participants agreed that training was vital if officers and staff were to deliver high-quality problem-solving: *"Obviously, people need to understand it so they need to understand the methodology. Without that then, you know, it's impossible to replicate. You have to understand why it's important."* [F17: Respondent 1017].

The survey respondents who were asked to identify barriers to problem-solving were also questioned on what they see as the key enablers of problem-solving. These are displayed in Figure 5. Many of the suggested enablers are the converse of the barriers described above, namely the need for more and better training (22%) and dedicated time and/or resources for

problem-solving (19%). The third most commonly identified enabler was quality guidance, including success stories and evidence of ‘what works’ (12%). Other cited enablers were leadership and/or management support (7%), partnership working and/or information sharing (7%) and greater awareness of problem-solving (typically discussed in relation to conferences) (6%).

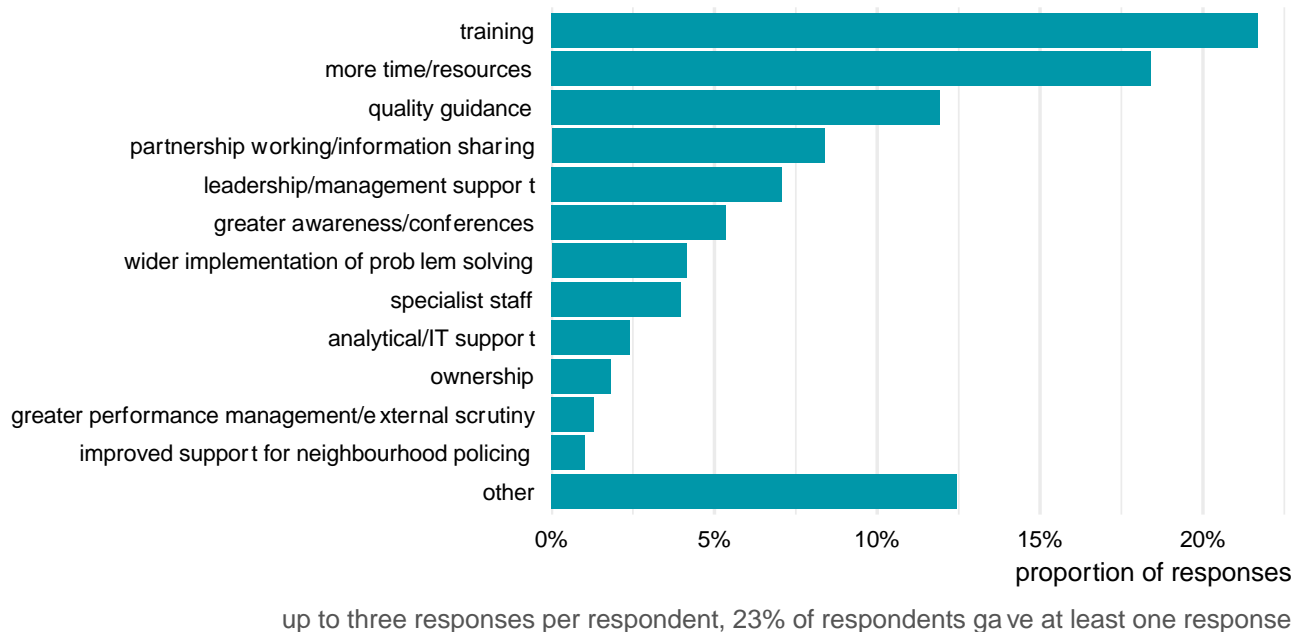


Figure 5 Enablers of problem-solving (n = 1,129)

On the attrition of analysts

In keeping with the results of our survey, a central theme among many interviewees was that they neither had access to nor experience of working with an analyst. As one participant quipped: *“I’ve definitely heard of the mysterious analysts. I haven’t come across them, and I haven’t used them yet.”* [F17: Respondent 1018]

The position of analysts within the police service was heavily affected by the austerity measures introduced in 2010, which led to a substantial reduction in the number of analysts, in some cases, reportedly to zero: *“So, during that [austerity] period, because obviously this restructuring was to do with costs. We lost all of our analytical support.”* [F20: Respondent 1035] Moreover, where analysts were available in participating forces, they reportedly were reserved for specialist roles or for the production of force performance measures; they were less available for problem-solving: *“we don’t have enough analysts to focus on the neighbourhood front-line policing element as well as some of the more complex themes that are emerging such as child sexual exploitation and modern-day slavery.”* [F12: Respondent 1044]

Interviewees mentioned various ways in which a shortage of analysts had negatively affected problem-solving. First, is a reduction in the quality of analytical products. Second, is the

reliance on front-line officers to do problem analysis themselves, many of whom do not have the necessary skills to do so. As one participant noted: *“Like many forces across the country, the analytical base that we have is very limited....In terms of problem-solving in the front-line with analytical support, I would describe us in a bit of a self-service situation.”* [F12: Respondent 2052] Third, a small number of participants suggested that a lack of analysts dedicated to problem-solving limited the types of problems to which problem-solving was applied, favouring those problems perceived to be more tractable (such as ASB) as opposed to more complex issues such as human trafficking.

It is noteworthy that in the face of reductions in the availability of analysts, some interviewees reported forces investing in systems that automate basic analysis. However, this situation was generally not seen as ideal as the analyses officers and staff were able to do using these systems were limited (sometimes because they had not been trained on the systems). As one respondent put it:

We just do it anyway, we tend to be able to look at our system. (O)ur [...]system enables us to search quite easily, (but) if you try to drill down into MOs etc it would be slightly more problematic, we couldn't do heat maps, we couldn't do timely analysis to show us when the times of the crimes are likely to occur so for that we would need them (analysts). [F18: Respondent 1022]

Guidance for problem-solvers

Quality guidance on problem-solving was identified by both survey and interview respondents as an important factor in facilitating the delivery of effective problem-solving. Fourteen of the twenty participating police forces responded to our request to supply problem-solving-related materials. In thirteen cases this included a guidance document on how to do problem-solving, albeit there was considerable duplication across these guidance documents, save for force-specific forewords and case studies. Analysis of the returned documents identified the following themes:

- There is considerable variation across police forces in the label used to describe a problem-solving approach including: problem-solving, problem-oriented partnerships and partnership-oriented problem-solving.
- Problem-solving is generally presented as a part of neighbourhood policing, and its application predominantly discussed in terms of tackling antisocial behaviour. Only a small proportion of returned documents discussed problem-solving's relevance to other areas of police business. Illustrative statements on the wider utility of problem-solving include 'embedding problem-solving and crime prevention at the core of our business' and 'putting problem-solving at the heart of everything we do'.
- In most cases the returned documents (and supporting processes they described) had been produced in the last two years. In only three police forces did the documents provide evidence that problem-solving and its supporting systems had been in place for over two years. In this vein, a number of forces provided information on internal award processes which were being planned but had not yet been implemented.
- Just under two-thirds of returned guidance documents were endorsed by a Chief Officer, suggesting that the approach is highly valued.

- Twelve of the fourteen supplied guidance documents made reference to relevant crime prevention theories and concepts, most notably the routine activity approach, crime analysis triangle and situational crime prevention.
- There was little reference to the importance of and mechanisms for working with partners when problem-solving.
- In no documents was it laid out what “good” problem-solving looks like or how to tackle common challenges encountered when problem-solving.
- There were few examples of innovative practices embracing new technologies to assist and enhance problem-solving training. Two notable exceptions include the use of digital learning environments to educate users on the practice and principles of problem-solving, and a virtual online network of problem-solving advocates to assist and advice on problem-solving work.
- Only one police force supplied guidance on ways to introduce and embed problem-solving across an entire police organisation.

Interview participants expressed preferences for particular kinds of guidance. For example, several participants stated that a repository of or network on which to share best practice and ‘what works’, with an emphasis on practical examples, was needed. Interview participants also drew attention to how simple and clear guidance, which was easily accessible and digestible, was essential for facilitating effective problem-solving. For this participant: *“Personally I think we have to keep things very simple, stuff like the SARA acronym and that approach is really good. You know, in terms of the toolkits, etc, they’re very good, we just need to make them available and communicate them down in a good way, really.”* [F12: Respondent 1044]

Leadership

On the subject of enabling problem-solving, one of the most consistent findings across our interviews concerned the importance of leadership. Senior support was identified as a necessary ingredient if problem-solving is to take root and flourish within a police force, through sending a clear signal to officers and staff that the approach is valued in the organisation and through providing sufficient time and resources to do effective problem-solving. The following two quotes are illustrative of the perceived importance of senior leadership: *“It needs to be a senior leader. It absolutely does have to come from the exec level, to just basically show that this is the fabric of the organisation [...] That’s how you’ve got to land it.”* [F18: Respondent 1020]. And: *“Leadership is the biggest thing. If they’ve got the driver for it, whatever size of force, if they’ve got the driver and the intention for it, it will happen.”* [F16: Respondent 1009]

A small number of interviewees described the difficulties in embedding problem-solving when senior leaders are not committed to or experienced in POP: *“The whole of the top corridor from superintendent upwards ... have all got CID background. So problem-solving is only something that’s done in neighbourhoods, as far as they’re concerned.”* [F22: Respondent 2017] Moreover, many participants attributed the characteristic rise and fall of problem-solving to changes in police leaders. As one participant lamented of his own force: *“A lot of our key champions left, so (named person) retired and (named person) left us as well [...] If*

you don't have that kind of leadership then it's very difficult to sustain it." [F14: Respondent 1065].

Bearing these points in mind it is worth recalling the force survey results described above. No senior officers completed the questionnaire. This may have reflected the time it would have taken, or even a feeling that the questions were designed specifically to enquire about the extent of *current* problem-solving activity rather than being specifically directed at senior staff.

Police and Crime Commissioners

The introduction of Police and Crime Commissioners (PCCs) and their equivalents occurred after previous attempts to take stock of problem-solving in England and Wales (for e.g. Read & Tilley, 2000). It is therefore unclear what impact, if any, PCCs have had on problem-solving. Potential contributions of PCCs include commissioning problem-solving projects, facilitating partnership working or placing an expectation on Chief Constables to adopt and promote this evidence-based way of working. Indeed, analysis undertaken as part of this research study found that of the forty most recently published PCC Crime and Policing Plans, 45% (n = 18) made reference to problem-solving (broadly defined).

Interviewees were asked to reflect on the relationship between the PCC and problem-solving in their force. A consensus emerged that PCCs have an important and varied role to play in problem-solving, for example: *"I think the PCC has a massive role to play in making funds ... available to problem-solving, to perhaps unlock doors or to assist with third sector agencies."* [F23: Respondent 2044] Moreover, most participants suggested that their PCC was largely supportive of a problem-solving approach, even if the main driver behind problem-solving is from chief officers rather than the PCC themselves: *"So the PCC echoes our Chief on this one, so problem-solving is good, we problem-solve, we must problem-solve."* [F13: Respondent 1059]

Examples of ways in which a PCC has directly influenced problem-solving were less apparent. Those that were identified, echoing the sentiments above, related mainly to the provision of funds and the bringing together of partners: *"The PCC does fund ... the community safety partnerships through grants. With some of those using it for problem-solving funding."* [F13: Respondent 1051] As an example of what can be achieved when PCCs buy into problem-solving, several participants pointed to the winner of 2018/19 Tilley Award, the *Durham Community Peer Mentoring Project* which was led by the Durham Police, Crime and Victims' Commissioner.

Critical voices were also heard, however. Some reported a perceived reluctance among PCCs to invest in what is typically a longer-term process, which may not produce results within an election cycle:

We're not really expecting to see outcomes from it probably for three or four years and that's a really difficult sell for a PCC who has got a commissioning budget where they actually want to demonstrate results more quickly than that to the public. There's a real hold your nerve bit about it. [F13: Respondent 1056]

Others felt that PCC funding could be better invested into problem-solving work that aligns with that of the associated police force:

I think the commissioner is missing a trick ... if you did POP right you'd have some good news stories which is what he's always looking for, good news stories to promote and he can demonstrate the impact it's had. So I think he's missing a trick and I think he can afford it because the money is there and he gets millions of pounds so he could even have a team of problem-solving analysts and I would recommend that you need at least one to support all the big processes and it will cost him realistically nothing because of what he'll get back in social value, return and political reputation would be huge. [F14: Respondent 1070]

Management and supervision

The support of chief officers was widely considered to be a necessary but insufficient condition for the implementation of POP. The active support of senior managers, middle managers and supervisors was also deemed crucial.

First, designating someone to act as the strategic lead was mentioned by some interviewees as a way of helping to embed problem-solving within police organisations. That person need not be the Chief Constable. Instead, that individual would be highly committed to problem-solving and able effectively to communicate its benefits. This was thought particularly important if the chief officer seemed remote and/or lacked the communication skills needed to enthuse front line officers in their problem-solving activities. Here, others may be better able or better placed to perform that role. For one respondent: “*you can't not have a dedicated lead that links in with the strategy of what we're trying to achieve here, to what the divisions are trying to achieve, and translating it into some actions.*” [F18: Respondent 1021] Because of the need for support in the conduct of problem-solving, some suggested that central, specialist teams should be set up to undergird problem-solving activities. To illustrate:

I think there has got to be some kind of small cohort of central support that (a) keeps the momentum going and (b) checks the quality. And then it's how you keep sufficient frontline support. So, the critical friends were always meant to be the frontline support. So, somebody you could go to who is a peer. Because cops are notoriously uncomfortable with asking a specialist team about how do I do this? Because cops can do everything, can't they? [F18: Respondent 1028]

Second, the absence of POP-promoting middle managers was also cited as a significant barrier to embedding POP. Middle managers were considered important as they are the individuals that officers and staff are most likely to come into contact with. Their support (or otherwise) for problem-solving can thus be influential in shaping the views of front-line officers. To illustrate:

The most important thing is to get your inspector cohort signed up in delivering problem-solving because they're the real key change agents in any force. It's the inspector rank, because they're the ones who are there 2am as the most senior rank.

So if they're the ones who are constantly going to take a step back from problem solving, you'll never land it. They are the key people. [F18: Respondent 1020]

Third, the line management was also frequently discussed as a factor that influenced whether problem-solving was delivered by officers or otherwise. Effective line management supervision – generally by sergeants – was viewed as a way of better embedding and advancing problem-solving, both in supporting practitioners through the problem-solving process and as a mechanism for overseeing the quality of problem-solving work. For one: *“Massively important, if you haven't got the support of the line manager it fails at the first hurdle.” [F2: Respondent 1041]* And for another:

The auditing ... and the supervision of that process needs to be done so the best training is always backed up with robust, and I mean robust, supervision because it's funny really because people are people and they go back to type, they have the training and then they either not totally forget it but it's sometimes, it's easier to do what they've always been doing as opposed to doing what they should be doing. [F12: Respondent 1046]

To operate effectively, however, it was suggested that supervisors needed to be experienced in and a champion for problem-solving. In some forces this was reportedly not always the case:

Because if you are supervising a problem, you need to understand what good problem solving is. If you've never done it yourself, which will be the challenge, if you just introduce problem-solving into a Force, how do you, as a supervisor, then sign that off to say, “Yes that's good” or “No that's not.”? So, when you start to go into the supervisory level really, it's a different perspective. [F18: Respondent 1021]

Culture

The notion of a ‘police culture’ acting in opposition to problem-solving was frequently mentioned by study participants. These discussions took several recurrent forms. The first revolved around the notion that problem-solving does not accord with the popular images of policing that lead people to join the service.

Yes, it's in all the stereotypes from all the media stuff, you know, all the things that people watch and they decide they want to be cops because of it, it's generally not because somebody's taken the time, you know, you don't get television programmes where a good cop's taken the time at a community meeting to really listen to what the community's got to say and work with them around solving an issue, you know, it is kicking doors down, driving fast, blue lights going [F13: Respondent 1056]

The second theme was that neighbourhood policing, where it is generally assumed problem-solving takes place, is disparaged by some within the police service:

I know for a fact that a lot of people on response, or the people I joined with or people who had more years' service than me, they don't see it as... it's not attractive to them

in any way, shape or form. They say, “I can’t think of nothing worse. Why do you want to go on to NPT? [neighbourhood policing teams] I can’t imagine anything worse.” [F16: Respondent 1001]

The third theme was that problem-solving is often seen as an indulgent extra that cannot be afforded in most areas of policing:

I think it’s a bit of a culture, in some aspects, and some areas of our business. It’s a pressured environment with many, many things to do and consider. And problem-solving is probably seen in areas, or certainly has been in the past, as a luxury, rather than a necessity. [F18: Respondent 1021]

Finally, a move towards problem-solving was taken to represent a fundamental challenge to the prevailing mindset of many police officers. As one interviewee put it, *“I think it’s going to be a lot of hard work to try and re-programme an officer’s mind to look at the problem-solving aspect...it’s a big ask.”* [F19: Respondent 1042]. Moreover, one respondent suggested that the police mindset necessary for problem-solving had become less sympathetic to it over the recent past:

I just think the culture of problem-solving has dropped away over the years, this is my personal opinion, I think it’s been lost within the police over the last ten years possibly through budget cuts - through lack of training. [F14: Respondent 1069]

The challenge of changing mindsets was also thought to extend to non-sworn police staff:

I think we as an organisation, I think it’s cultural, I think it’s going to be a big cultural challenge to embed problem-solving because we’ve never had it before and I think it’s getting people into that mindset of looking at things differently and taking responsibility within their own small departments and teams and as I said, not necessarily uniform or responsibility but back office and other supportive functions such as fleet, procurement, so they all really needed to buy in to problem-solving. That, I think, is going to be our biggest challenge. [F16: Respondent 1004]

Planning and governance

Most participants acknowledged the importance of having formal structures in place to record and monitor the problem-solving activities within a police force to check that problem-solving was taking place, to monitor quality, to incentivise officers, and to try to make sure that lessons were passed on for future problem-solving. However, the methods of oversight were often found clumsy and counterproductive:

Our systems and processes that we have at the moment don’t lend themselves to assist, so that again identifies another blockage, I suppose, in that we’re currently having a new system and a system upgrade with a new computer system as of next week, which will hopefully provide the facility to record problems. [F17: Respondent 1013]

Problem-solving novices could be confused by the terminology used in some systems:

I think if you've been trained and you've been on the course, you're okay. I think if you're asking them to think, "What's the hypothesis of this?" And you've not had any training, yes you're probably going to be a bit overwhelmed. I think the training is important and for me around problem-solving as long as you've been trained, you don't need to be an inspector or sergeant to own the plan. [F13: Respondent 1057]

In some cases, the monitoring forms used seemed to overcomplicate what had been relatively straightforward in practice.

... one of the things that I think puts humans off, not necessarily the police officers or PCSOs is, you can do all that, there's a big long form to fill in. It's just, oh, I'm not doing that. ... And particularly the nature of people that join policing, they want to be outside in the fresh air, want to be out talking to the public, they don't often want to be sat filling forms in. So I think practical, straightforward, based in evidence. Without switching them all off by saying, "There's an academic theory that underpins this." Because that's, oh, crikey. [F13: Respondent 1051]

Somewhat in contrast, some interviewees were concerned that recording problem-solving could be reduced to 'tick box' exercises completed merely for presentational purposes and to comply with the current resurgence of interest for problem-solving, with little to do with the delivery of effective interventions.

I think there was pressure that they give it as a PDR [Performance and Development Review] so all officers were told to do one or two POPs as part of their PDR. I think that created dysfunctional behaviour of people putting them for the sake of putting them in rather than identifying a particular problem. [F14: Respondent 1070]

Motivating and incentivising problem-solving

Several interviewees talked of the importance of sharing and celebrating examples of successful problem-solving. Doing so was viewed to be an effective means to raise awareness of, add momentum to, and encourage others to embrace problem-solving. The following two quotes are illustrative of the consensus among study participants:

I think you need to use some really key examples to show where the benefits are. (S)tart...in areas where you're going to get success stories... (W)ith repeat callers, with antisocial behaviour and some of the vehicle crime... you can get a good result..., particularly around car parks and things like that. (S)o it's demonstrating that, look at this, try this, it works, and giving them the examples of how it does work, and then move up to the more difficult ones. [F19: Respondent 1039]

But we've got to celebrate the success, haven't you? You've got to demonstrate the worth. It's that thing about "What's in it for me? Is this going to make my life easier?"

“Actually yes it is”, if you get it right, but actually if you don’t along the way, well, we’ll learn something from it.... [F18: Respondent 1032]

A small number of participants suggested that the outcome of effective problem-solving was sufficient reward in and of itself:

...and the reward for me in terms of why should they adopt that approach ...because of .. the rewards... at the end of it. (P)art of that should be job satisfaction and dealing with it and seeing a problem or someone protected or a problem resolved or neighbours living in harmony etc. [F14: Respondent 1071]

Generally, however, it was felt that formal systems need to be in place to reward and recognise good problem-solving. This need was discussed in one of two ways: (1) recognition of problem-solving in promotion processes and (2) establishment of an in-force award scheme and/or conference to share and celebrate problem-solving efforts.

In relation to promotion, there was notable variation between participants in respect to whether they felt or knew whether problem-solving was incorporated into the promotion processes in their force. In those forces with a longer history of problem-solving, interviewees described how problem-solving was a core feature of the promotion process. In other forces seeking to embed a problem-solving approach, participants talked of moving towards incorporating problem-solving into promotion processes: *“We will be looking for evidence of problem-solving which encourages people to jump on board.” [F13: Respondent 1059]* Moreover, some described how exhibiting problem-solving skills was a good way to increase one’s chances of being promoted:

(I) If I was giving careers advice to somebody who wants to get promoted, one of the first things I would say is, “What problem-solving have you done? Do you understand it? Have you presented at the POP awards ever?” Because if you haven’t then I’m not saying that’s the only way but that’s a really good way of showing that you’ve got some sort of leadership qualities really and able to pull that. [F18: Respondent 27]

The use of local problem-solving awards and conferences to raise awareness of and celebrate good work in the area was generally understood to be local versions of the national (Tilley Award) and international award schemes (Goldstein Award). Most participating forces in this research either talked of plans to introduce such a scheme or that such schemes were already in existence. Moreover, the common consensus among interviewees was that such activities are useful in helping to embed and advance a problem-solving approach:

I’d like to think that by having an awards ceremony which we invited people to... kept it in the minds of our colleagues, and hopefully kept it in the minds of some of the more senior officers ... to get them to sort of support it and make space for it. [F19: Respondent 1037]

It’s the recognition of their work. All of that has to be in place. If you lose that, I think we’ll lose that impetus around driving the model. [F18: Respondent 1020]

REFLECTIONS AND SUGGESTIONS

This final chapter is formed of two sections. Section one summarises the main findings of this research. It provides an overview of the patterns and trends in POP in England and Wales in 2019. Section two looks to the future. Drawing on the research reported here it sets out some of the key structural and organisational factors that might support the further development of POP. It then identifies gaps in our current knowledge and suggests an agenda for future research.

1. SUMMARY OF MAIN FINDINGS

The intention of this study was to provide a snapshot of POP as it is viewed and practiced by a sample of police forces in England and Wales in 2019. This was achieved by drawing on and triangulating multiple lines of evidence using both primary and secondary data. The study was conducted against the backdrop of previous research which has shown that interest in problem-solving has waxed and waned in the police service over the past 40 years. And thus, despite extensive evidence for and widespread endorsement of POP, it has not become the standard police way of working.

The present ‘push’ for problem-solving is different in nature from previous attempts to foster POP. Early attempts were very personal to the Chief Officers in the forces involved. For example, Sir Kenneth Newman, Metropolitan Police Commissioner from 1982-87 was an early adopter of POP but the ideas did not stick. Pauline Clare, Chief Constable in Lancashire from 1995-2002, was similarly an enthusiast and went to considerable lengths to encourage the approach. More recently the Crime and Disorder Act (1998), although it did not advocate problem-solving per se, did encourage the analysis of local crime data and the preparation of a strategy to reduce crime, all to be discussed with the local communities. It thus had affinities with the problem-solving approach.

The successful bid to the Home Office PTF that led to commissioning the research reported here reflects contemporary recognition that a problem-solving approach can help improve policing and manage the demands on the police service. However, the PSDRP differs to previous attempts to foster POP in that it attended to what might facilitate adoption of the approach nationally, what might inhibit the development of POP, how it might be embedded and become a part of routine policing and what national infrastructure might support it.

The results of this study suggest that the PSDRP, in combination with the work of the COP, NPCC and HMICFRS, seems to have boosted the interest and involvement in problem-solving in a significant number of police forces in England and Wales. Interviewees provided evidence that problem-solving can be successfully ‘sold’ to police officers, staff and partners. Indeed, many of those with whom we spoke mentioned their heightened job satisfaction and huge pride in better serving their communities. Interviewees and Tilley Award entries furnished some clear stand-out examples of good practice, applied to wide range of police-relevant problems and involving diverse partners.

But it is also clear from this study, as with previous research, that problem-solving is not the default model of contemporary policing. Our findings suggest that problem-solving is

synonymous with and mainly practiced by neighbourhood policing teams. Its use in other areas of police business is minimal. Its use in tackling current police priorities such as child sexual exploitation, county lines and missing persons is rare. The adequacy of problem analysis and assessment remains variable at best. Enforcement-related responses predominate. Most self-identified problem-solvers felt under-skilled, under-trained and lacking the necessary time and resources to do effective problem-solving. The lack of analysts to support problem-solving is significant. More generally, it remains the case that problem-solving is precarious, widely seen to be at odds with the prevailing police culture and its prominence within a police force heavily dependent on the commitment of senior leaders.

This study of course has several strengths and weaknesses. There were clearly temporal and financial constraints on what could be achieved in this research. And whilst the study drew on multiple lines of evidence collected from a large number of police forces, it is acknowledged that the final sample of participants are likely not representative of the police service of England and Wales. The online survey which was intended to act as a corrective to biases that may occur from drawing on self-selected interviewees achieved a low response rate, which itself may be an indicator of the extent to which further work is needed to enthuse British police services for problem-solving. The inclusion of field observations and focus groups with randomly selected police officers and staff may have provided a more representative take on contemporary problem-solving.

Issues of representativeness notwithstanding, it is contended that the results reported here provide a picture of the current state of problem-solving in England and Wales; a baseline against which any future developments can be judged. Box 1 summarises what was found about the current state of police problem-solving using bullet points. They suggest that although problem-solving is alive and in some areas flourishing, there are still significant issues in need of attention.



BOX 1: Problem-solving in England and Wales in 2019...

- Is considered relevant to dealing effectively with both internal administrative issues and the full spectrum of crime and non-crime issues that fall within the police remit
- Has a range of enthusiastic supporters and advocates
- Often involves partnership working
- Is largely delivered through the SARA model and its extension OSARA
- Exhibits some good examples across many police forces, dealing with a wide range of internal and external problems
- Is largely thought to be applicable throughout police organisations
- Is largely (though not exclusively) confined to neighbourhood policing
- Has been inhibited where neighbourhood policing has atrophied and analysts withdrawn as a result of austerity
- Is largely uninformed by reputable research findings
- Is largely undertaken without the involvement of external researchers
- Is largely uninformed by sophisticated analysis and fails to make use of diverse data sets
- Is rarely followed by technically adequate assessment
- Often involves some form of enforcement
- Confronts difficulties in mobilizing certain third parties, particularly those in the private sector
- Encounters some cultural obstacles, where what is entailed departs from traditional police practice
- Is inhibited by police officers who feel that they lack the training, expertise, or time to undertake it
- Rarely focuses on major contemporary police issues such as cybercrime or modern slavery.

2. MAINSTREAMING POP

The patterns observed in this study suggest a resurgence of interest in problem-solving in England and Wales. Yet this study, like others before it, also identified several obstacles to implementing, embedding and maintaining problem-solving in the long term. Capitalising on the apparent revival in problem-solving will likely require the removal of these obstacles. Failure to do so may lead to the characteristic abandonment of POP and subsequent reversion to traditional methods of policing.

In the interests of mainstreaming POP, and drawing on the results of this study, Box 2 sets out the conditions under which problem-solving is more likely to survive, spread and thrive. It covers factors relating to both local police forces (such as leadership and incentives) as well as national bodies whose actions and directives can promote and facilitate a problem-oriented way of working, most notably the COP, NPCC and HMICFRS.



BOX 2: Conducive conditions for problem-solving to thrive include ...

- Enthusiastic and visible leadership from Chief officers and clear and unambiguous management downwards
- Rewards to act as incentives for active and positive involvement in problem-solving
- Involvement of third parties in the development and delivery of responses
- Relevant, accessible and user-friendly training and guidance
- Co-operation between neighbourhood policing teams and other specialists within the police service
- Access to competent and expert advice and support in analysis, assessment and the development of responses to problems
- Access to reliable and relevant police and other data sets for analysis and assessment
- Systems, such as promotion processes and awards that recognise and reward engagement in systematic problem-solving
- User-friendly and simple systems to log and monitor problem-solving initiatives
- Involvement with relevant partners in dealing with problems
- Support from Police and Crime Commissioners and their equivalents
- Time for key staff to devote to longer-term problem-solving
- A police culture that cultivates innovation in problem-solving, and which accepts that instances of failure are an inevitable corollary of innovation
- Continuing national support for problem-solving at all levels in policing, for example by the COP, HMICFRS and NPCC.

We end by fleshing out some of these more important points for delivering problem-solving:

Leadership: Of the factors listed in Box 2, one of the most consistent issues to emerge from this study was the importance of clear, consistent and unambiguous local leadership, not least to help move away from the prevailing police culture of response to one of prevention.

Guidance: Guidance was identified by study participants as being an important enabler of problem-solving. In response, we have produced two guidance documents based on the research reported here and other supplementary material: a guide for officers and staff wishing to adopt problem-solving and a guide for senior officers providing advice on implementation. We hope that these will encourage the continued adoption of POP, which it seems to us to be increasingly relevant and important as new technologies develop and provide further opportunities for crime and disorder. Both guides are available on the Knowledge Hub or from the authors on request.

Research: Research can also help. In identifying recurrent obstacles to implementing and sustaining problem-solving, it is also apparent that it is not clear how to overcome them. We lack research evidence relating to effective and efficient methods of doing so. This suggests a research programme to generate robust evidence on which those wanting to adopt and deliver a problem-solving approach can draw. This is not a reason, of course, not to try to take action now. However, we outline briefly below what emerged from this study as important knowledge gaps that future research might fill to enhance longer-term local and national capacity in police problem-solving.

Culture change: Cultural obstacles emerge as serious inhibitors to the widespread adoption of problem-solving as normal business in policing. As this study showed, problem-solving is widely seen to be the province of neighbourhood policing teams. It has struggled to take root in other areas of police business. It is relatively easy to identify the changes that are needed for POP to be applied more widely – for example routine recognition of problem-solving as a core police activity, routine thinking in accordance with SARA, and automatic consideration of risks of repeat incidents when attending calls for service. Yet it is not so easy to know how to effect the sort of cultural transformation that would be needed to maintain these changes in behaviour and mentality. Action research orientated to trying out strategies to effect cultural transformation to that which better embraced a problem-orientation would help fill an important knowledge gap.

Training and capacity building: Study participants identified the absence or lack of training as a limitation in both the extent and quality of problem-solving. Yet it is not so clear how to remedy the gap. The term ‘training’ may not even be entirely appropriate in relation to the needs of those involved in problem-solving. More than ‘training’ may thus be required to build and solidify the skills and knowledge needed to become an effective problem-solver. In other professions, a blend of book-learning, face-to-face instruction and on-the-ground mentoring and coaching from experienced practitioners is the norm. This is the case for doctors, accountants, lawyers, dentists and nurses. Something akin to this may be needed for problem-solving. The research evidence is largely silent on this topic. Furthermore, in this study we found only a handful of innovative practices where web-based technologies were being drawn on to deliver problem-solving training. Systematic research trialling methods of inducting police personnel into problem-solving would help improve the evidence-base.

Recording/tracking/monitoring problem-solving: It is generally acknowledged that tracking problem-solving is important both for accountability and for capturing transferable lessons that others can draw on. However, it is equally clear that many existing systems are inadequate. Study participants suggested that current systems are often clunky, completing them was found to be onerous, and the data they contained remained unused or underused. There would be clear benefits in finding a workable system that both supported and promoted problem-solving, which could be adopted across police forces. Presently, however, it is not known what a “good” problem-solving recording system looks like. There is an important piece of work to do in reviewing existing systems and trialling one that builds on their strengths and tries to avoid their weaknesses, with a view to encouraging common adoption across police forces.

Wicked problems: It remains the case that problem-solving is most commonly targeted at high volume issues such as ASB. Its use in tackling current police priorities such as missing persons, county lines and child sexual exploitation was apparent in this study but infrequent. There are always emergent ‘wicked’ problems that come to the attention of the police. These are problems that fall between or across agencies for which there is no known solution. Examples could include romance scams, child sexual exploitation and on-line stalking. These problems are found quite widely, but are unlikely to be solved by the police alone. They also cross-force borders whereas the vast majority of contemporary problem-solving is local to specific police forces. In an effort to test the wider application of problem-solving to these kinds of problems, it is contended that the creation of seconded, analytically supported, cross-disciplinary

problem-solving work groups aiming to devise and test transferable strategies, comprise one way of building the national problem-solving evidence base.

Data/analytic systems: Data and analysis are the life-blood of problem-solving. Yet, grass roots access to data and the means to extract and analyse data are generally only rudimentary. Analytic packages are, of course, available but can be technically challenging to use. Yet it is not clear what kinds of analysis using what kinds of data can most usefully be put in the hands of front line officers. There is scope for experimentation in police services in the provision of data and data analysis systems to determine what can in practice best serve front line officers who lack ready access to specialist analysts.

To conclude, this report has discussed the state of play with regard to problem-solving in England and Wales in 2019. Delivering problem-solving can be challenging, but the best evidence tells us it is an effective way of reducing crime and disorder. It is hoped that this research, and the recommendations that are derived from it, will provide lessons from which those seeking to conduct problem-solving can usefully draw.

REFERENCES

- Braga, A. A. (2008). *Problem-oriented policing and crime prevention*. Criminal Justice Press Monsey, NY.
- Bullock, K., Erol, R., & Tilley, N. (2006). *Problem-oriented policing and Partnership*. Cullompton: Willan Publishing.
- Bullock, K., Farrell, G. and Tilley, N. (2002). *Funding and Implementing Crime Reduction Projects*. Home Office Online Report 13. London: Home Office.
- Clarke, R. V. (1997). *Problem-oriented policing and the potential contribution of criminology*. Report to the National Institute of Justice. Available at: <https://popcenter.asu.edu/sites/default/files/library/reading/pdfs/POP-SCP-Clarke.pdf>
- Eck, J. and Spelman, W (1987). *Solving Problems: Problem-oriented Policing in Newport News*. Washington: Police Executive Research Forum.
- Goldstein, H. (1979). Improving policing: A problem-oriented approach. *Crime & Delinquency*, 25(2), 236–258
- Goldstein, H. (1990). *Problem-oriented policing*. New York, NY: McGraw-Hill.
- Goldstein, H. (2012). Herman Goldstein Interview available from <https://www.youtube.com/watch?v=dL3wiELwkDU> see from 57 minutes.
- Hinkle, J. C., Weisburd, D., Telep, C.W. and Petersen, K. (2020). *Problem-Oriented Policing for Reducing Crime and Disorder: An Updated Systematic Review and Meta-Analysis*. Campbell Collaboration systematic review.
- Kirby, K. and Reed, D. (2004). *Developing a Problem-oriented Organisation*. London: Association of Chief Police Officers.
- Leigh, A., Read, T., & Tilley, N. (1998). *Brit POP II: Problem-oriented policing in practice*. *Police research series, Paper No. 93*. London: Home Office Policing and Reducing Crime Unit.
- Metcalfe, B. (2001). The strategic integration of POP and performance management: a viable partnership? *Policing and Society: An International Journal*, 11(2), 209–234.
- Ratcliffe, J. (2018). *Reducing crime: A companion for police leaders*. London: Routledge.
- Read, T. and Tilley, N. (2000). *Not Rocket Science?: Problem-solving and Crime Reduction*. Crime Reduction Research Series Paper 6. London: Home Office.
- Schnobrich-Davis, J., Block, S. and Lupacchino, J. (2018). Analysis of Herman Goldstein Problem-Oriented Policing Awards from 1993-2017. *Policing: A Journal of Policy and Practice*.

- Scott, M. (2000). *Problem-Oriented Policing: Reflections on the First 20 Years*. Washington D.C.: US Department of Justice, Office of Community Oriented Policing Services.
- Scott, M. (2006). Implementing crime prevention: Lessons learned from problem-oriented policing projects. *Crime Prevention Studies*, 20, 9.
- Scott, M. (2017). Reconciling problem-oriented policing and evidence-based policing. In *Advances in Evidence-Based Policing* (pp. 27–44). London: Routledge.
- Scott, M. and Clarke, R. (2020). *Problem-oriented Policing: Successful case studies*. Routledge
- Sherman, L. (1998). *Evidence Based Policing*. Washington, DC: Police Foundation.
- Townsley, M. Johnson, S. and Pease, K. (2003). Problem-orientation, Problem-solving and Organisational Change. *Crime Prevention Studies Volume 15*. Willan: Cullompton.

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APPENDICES

Appendix A – Adapted and anonymised version of letter inviting police forces to take part in this research

Dear [name];

Re: Problem Solving and Demand Reduction Programme: Request to Host Research

I am writing to you in the hope that you will facilitate an important research project in your constabulary.

As you will know, in 2017, South Yorkshire Police received funding from the Home Office Police Transformation Fund to deliver a three year programme of work concerned with problem solving and demand reduction. We have now appointed a team of researchers from University College London, the University of Central Lancashire, the University of Huddersfield and the University of Surrey, to evaluate the activities associated with this programme.

There are different components to the research, but broadly speaking the aim is to establish a baseline of current problem solving and demand reduction activity across police forces in England and Wales, and to identify potential obstacles and barriers to the adoption of problem solving. The research promises to generate a number of useful resources, including guidance on the 'key ingredients' for successfully implementing a problem solving approach.

The research team is well aware that hosting research can absorb resources, and have taken steps to minimise any impact that may arise from participating in this research. Attached to this letter is a plan setting out what participation in the research entails, how much time we think it will take, and the arrangements for mitigating any impact on you and your colleagues. The appended material also sets out how the research process will be managed and how collected data will be securely stored.

We hope that you agree to participate in this research. If you would like to discuss any aspect of the project in more detail, please contact Dr Aiden Sidebottom (UCL), the Principal Investigator for the research (details below).

We look forward to hearing from you soon, and of course if you have any concerns or comments do get back to me.

Yours sincerely

CC Steve Watson

The research team:

Principal investigator – Dr Aiden Sidebottom (UCL)
Co-investigator – Prof Nick Tilley (UCL)
Co-investigator – Prof Gloria Laycock (UCL)
Co-investigator – Dr Matt Ashby (UCL)
Co-investigator – Prof Rachel Armitage (Huddersfield)
Co-investigator – Prof Karen Bullock (Surrey)
Co-investigator – Prof Stuart Kirby (University Central Lancashire)

Managing and facilitating the research

We suggest that a single point of contact within your force is nominated to coordinate the research with the Principal Investigator (Dr Aiden Sidebottom). Once agreed, the single point of contact and Principal Investigator will take forward the implementation of the research. In our experience, the single point of contact should probably be someone within a chief officer's office - perhaps a staff officer. This typically enables the chief officer to retain a good overview of the research and tends to ensure that the research is given sufficient momentum and status within the organisation. However, other arrangements are of course possible, and can be discussed with the research team.

What participation in the research entails

Participation in this project relates to four activities: (1) the distribution of an online survey, (2) interviews with police staff associated with problem solving and demand reduction, (3) observations of those working in areas to with problem solving and demand reduction and (4) the provision of relevant documents. Discussing each in turn:

Online survey - We would like to circulate to all staff an online survey on problem solving and demand reduction activity. The survey has been developed by the research team who will work with the single point of contact to make the necessary arrangements for circulation. Based on our experience, we know that police forces have different expectations and requirements for hosting online surveys. We may need to speak to your ICT team regarding the best way to distribute the survey but this should be a fairly minimal time commitment. Most likely the survey would be circulated via an 'all staff' email though it might be hosted on a force intranet page. We would like the service to advertise the survey - perhaps on a staff intranet or by an accompanying email from a chief officer explaining the survey and asking colleagues to fill it in. We are aiming for a sample size in the order of 150 individuals per police service (but the bigger the better). In mitigating the impact of the survey, we assure you that the survey: (1) will take only 10 minutes to complete and (2) makes extensive use of question routing in order to divert respondents to particular questions depending on previous answers. Respondents would not therefore be answering unnecessary questions, thereby minimising completion time.

Interviews – We would like to interview between ten and fifteen individuals in your organisation. The single point of contact and research team will need to work together to identify the best people to speak to. These individuals should have some knowledge of

problem solving and demand management in your force. Examples include senior officers / managers such as chief officers and BCU commanders, neighbourhood policing inspectors and (where relevant) other staff directly involved in problem-solving work, crime Prevention/Reduction Officers and so on. Where relevant, any identified 'force champions' or 'experts' would be useful interviewees.

In mitigating the impact of these interviews we: (1) will minimise the time commitment of the interview - probably 45-60 minutes max and (2) will offer the option of phone or Skype interviewing if it is more convenient.

Documents - We would also like copies of any corporate documents that relate to problem solving and demand reduction activities. The single point of contact and research team will need to work together to identify these documents, and we can provide examples of what we have in mind. In mitigating the impact, we stress that whilst the single point of contact may need to consult with colleagues, we expect only a minimal time commitment to collate the sought-after documents and pass them to the research team.

Our assurances over data storage and collection

In terms of the storage and use of data collected as part of this project, we give the following assurances: (1) all information collected as part of this project will be treated as confidential and kept anonymously, with individual responses not being traceable to specific individuals, departments and/or organisations in written reports, and (2) all data collected in this project will be stored in a safe and secure manner in compliance with GDPR and UCL data management policies. All research team members have security clearance.

Appendix B – Online survey

[Headings shown here were not necessarily presented to respondents, but are included for ease of understanding.]

Introduction

We would like to find out about the work you are doing to reduce demand and tackle crime and disorder problems. This is part of a project led by South Yorkshire Police to help police make communities safer. We are surveying all officers and staff in a randomly selected sample of 20 police forces. For our findings to be accurate, ideally everyone will respond so please spend a few minutes completing this survey.

In this survey we will ask questions about police problem solving, which we think of as being a structured process in which police and others identify specific problems, analyse them to understand how best to respond, choose responses based on that analysis and then assess whether or not the problem has been solved. You might have also heard this referred to as problem-oriented policing (POP) or as the Scanning, Analysis, Response, Assessment (SARA) process, but we will use the term problem solving in this survey.

Please be honest – this survey is anonymous and it is important that we understand your genuine opinions. Please give your answers whether or not you know about, are currently involved in or are keen on problem-solving. The survey should take about 10–15 minutes to complete, depending upon your answers.

How we will use your answers

Before we can ask you any questions, we have to explain how we will use the information you provide in this survey.

This survey is voluntary and anonymous – responses will be held in confidence and no individual will be identifiable in the outputs of the research. This means that once you submit your answers, there will be no way for us to remove your responses because we will not be able to identify them separately from those of other people. The survey being anonymous also means that you will not be able to save the survey part-way through and return to it later. We will use the information you provide to help us understand problem solving in policing and how it can be improved. We may also share the information with researchers in future policing research projects. We will not use any information to make decisions about or judgements on individual officers, staff or teams. All the data will be collated and processed by the research team at University College London (UCL), not by your force. This research project has been approved using the UCL ethics procedure.

We are using Survey Monkey software to run this survey, and you can read more about how they keep your data safe in their privacy policy.

If you have any questions about this survey, please contact Dr Matt Ashby (UCL), one of the researchers working on this project, at *[researcher email address]*

Opinions on problem solving

1. We are interested in your individual opinions on policing. We are going to show you several statements and ask if you tend to agree or disagree with each one.

[The following statements were presented in random order, with each respondent presented with one version of each statement at random. For each statement, respondents were asked to select one answer from “I tend to agree with this statement”, “I tend to disagree with this statement” or “I don’t know or I have no opinion on this statement”. Answers to the ‘negative’ versions of each statement were then reversed for analysis.]

Statement 1:

- a. Before starting this survey, I was aware of the term ‘problem solving’ (also known as problem-oriented policing or the SARA process) in policing
- b. Before starting this survey, I was not aware of the term ‘problem solving’ (also known as problem-oriented policing or the SARA process) in policing

Statement 2:

- a. Police have the time and resources to do effective problem solving
- b. Police *don’t* have the time or resources to do effective problem solving

Statement 3:

- a. I generally have access to the information I need to resolve crime and disorder issues
- b. It is generally difficult to access the information I need to resolve crime and disorder issues

Statement 4:

- a. Resolving crime and disorder issues is more the responsibility of the police than of other agencies
- b. Resolving crime and disorder issues is more the responsibility of non-police agencies than the police

Statement 5:

- a. Policing is mainly about enforcing the law
- b. Policing is mainly about things other than enforcing the law

Statement 6:

- a. Generally, I have a positive view of problem solving in policing
- b. Generally, I have a negative view of problem solving in policing

Statement 7:

- a. Most senior officers in my police force actively support problem solving

- b. Most senior officers in my police force do *not* actively support problem solving

Statement 8:

- a. Problem solving is an important part of policing in general
- b. Problem solving is *not* an important part of policing in general
- c. Thinking about policing in general, problem solving techniques are typically useful in helping to deal with the types of problems officers are asked to resolve
- d. Thinking about policing in general, problem solving techniques are typically *not* useful in helping to deal with the types of problems officers are asked to resolve

Statement 9:

- a. When working out how best to resolve issues the public report to us, we usually work with other agencies – only occasionally do the police work alone
- b. When working out how best to resolve issues the public report to us, police usually work alone – only occasionally do the police work with other agencies

Statement 10:

- a. Problem solving is relevant to almost every area of policing
- b. Problem solving is only relevant to a few areas of policing

Statement 11:

- a. I have had sufficient training in police problem solving
- b. I have little or no training in police problem solving

Statement 12:

- a. I routinely practice problem solving when dealing with crime and disorder issues
- b. I rarely practice problem solving when dealing with crime and disorder issues

Statement 13:

- a. We have ready access to information on how to carry out problem solving
- b. We receive limited or no information on how to carry out problem solving
- c. We have ready access to guidance on how to carry out problem solving
- d. We receive limited or no guidance on how to carry out problem solving

Statement 14:

- a. I think most of the people in my team have a generally positive view of problem solving in policing
- b. I think most of the people in my team have a generally negative view of problem solving in policing

Statement 15:

- a. My team has access to an intelligence analyst to support our work
- b. My team does *not* have access to an intelligence analyst to support our work

Statement 16:

- a. Problem solving is an important aspect of evidence-based policing
- b. Problem solving is *not* an important aspect of evidence-based policing
- c. Using research evidence is an important aspect of problem solving
- d. Using research evidence is *not* an important aspect of problem solving

Statement 17:

- a. Interventions are generally more effective when they are tailored to the particular features of a crime or disorder issue
- b. Interventions are *not* any more effective when they are tailored to the particular features of a crime or disorder issue
- c. Similar police tactics can be effective regardless of the particular features of a crime or disorder issue
- d. Police tactics will only be effective if they take account of the particular features of a crime or disorder issue

Statement 18:

- a. I am confident that I understand what problem solving involves
- b. I am not confident that I understand what problem solving involves

Usefulness of problem solving for different problems

2. How useful do you think problem solving techniques might be in responding to the following issues?

[The following problem types were presented in random order, with respondents asked to choose one of “very useful”, “somewhat useful”, “a little useful”, “not at all useful” or “don’t know” in each case.]

- Road traffic collisions
- Mental health incidents
- Shoplifting
- Children missing from home
- Domestic abuse
- Gang-related violence
- Online fraud
- Violent extremism or radicalisation
- Neighbour disputes
- Modern slavery

Practice of problem solving

3. When dealing with crime and disorder issues, what information do you tend to use to understand the problem or choose responses?

[The following information sources were presented in random order, with respondents asked to choose one of “I use this frequently”, “I use this sometimes”, “I use this rarely”, “I have not used this but I am aware of it” or “I was not aware of this” in each case. Note that the “National Crime Response Database” is fictional.]

- Information from crime reports
- Information from 999/101 calls
- Intelligence reports
- Information from community meetings or groups
- Information from partner agencies
- College of Policing Crime Reduction Toolkit
- Campbell Collaboration systematic review libraries
- POP Center
- POLKA Knowledge Bank
- National Police Library
- CrimeSolutions.gov
- National Crime Response Database
- Police national Knowledge Hub

4. When dealing with crime and disorder issues, how often do you typically discuss the problem or options for responding to it with the following groups?

[The following groups were presented in random order, with respondents asked to choose one of “often”, “sometimes”, “rarely” or “never” in each case. Note that the “Central Problem Advice Service” is fictional.]

- Neighbourhood policing teams
- Response teams
- CID/specialist crime investigation teams
- Crime prevention/reduction officers
- Intelligence analysts/bureau
- Officers or staff from other police forces
- Staff from other public agencies
- Staff from charities or voluntary organisations
- Researchers from universities or other research organisations
- Members of the community
- Central Problem Advice Service

5. Thinking only about non-police agencies (such as charities, universities and the community), what are the main reasons why you rarely or never discuss problems or response options with them?

[free-text answer]

6. Thinking about the past 12 months, have you been involved in a project which you would describe as an example of problem solving?

- Yes
- No

[Respondents answering 'yes' to question 6 were asked questions 7 to 12 while respondents answering 'no' to question 6 were asked questions 13 to 15. All respondents were then asked to complete questions 16 onwards.]

We are going to ask some questions about the project you have been involved in during the past 12 months that you would describe as an example of problem solving. If you have been involved in multiple problem-solving projects in the past 12 months, please give your answers based on the most-recent project you have been involved in.

7. What problem did this project focus on?

[free-text answer]

8. What, if any, other agencies, groups or community members were involved in this project?

[free-text answer]

9. What did this project do to respond to the identified problem?

[free-text answer]

10. How would you describe the results of this project?

- Very successful
- Somewhat successful
- Mixed
- Slightly successful
- Not at all successful

11. Based on your experience of problem solving, what do you think are the main barriers (if any) to practicing problem solving in your police force?

[free-text answer]

12. What (if anything) do you believe can be done to promote the use of problem solving in your police force?

[free-text answer]

13. What, if any, are the main reasons you have not been involved in a problem-solving project in the past 12 months?

[free-text answer]

14. How likely do you think it is that you will carry out any problem-solving work in future?

- Very likely
- Somewhat likely
- Neither likely nor unlikely

- Somewhat unlikely
- Very unlikely

15. What is the main reason for your thinking this?

[free-text answer]

16. Have you heard of any of these initiatives?

[The following initiatives were presented in random order, with respondents asked to choose one of “yes”, “no” or “don’t know” in each case. Note that the “Common Network for Crime Problem Solving” is fictional.]

- National Problem Solving and Demand Reduction Programme
- Tilley Awards for problem solving
- Common Network for Crime Problem Solving

A little about you

We would like to know a few things about you, solely to help understand how answers to this survey vary between different people. This survey is anonymous and we will not try to identify you from this information.

17. Which police force do you work for?

[drop-down list of police forces in the United Kingdom]

18. What is your current rank or grade?

- Constable/Detective Constable
- Sergeant/Detective Sergeant
- Inspector/Detective Inspector
- Chief Inspector/Detective Chief Inspector
- Superintendent/Detective Superintendent
- Chief Superintendent/Detective Chief Superintendent
- Community Support Officer
- Police staff (non-managerial)
- Police staff (managerial)
- Special Constable/Police Support Volunteer
- Prefer not to say

19. What is your current role?

[free-text answer]

20. How long have you been working for a police force?

- Less than two years
- Between two and five years
- Between six and ten years



- More than ten years
- Prefer not to say

21. What is your gender?

- Female
- Male
- Transgender
- Prefer not to say
- Other (please specify)

22. How old were you at your last birthday?

- Under 18
- 18–24
- 25–34
- 35–44
- 45–54
- 55–64
- 65+
- Prefer not to say

23. Which, if any, is the highest of these qualifications that you hold?

[Qualifications were grouped using the Regulated Qualifications Framework for England.]

- GCSE, O level or NVQ level 2
- A level, AS level or NVQ level 3–4
- DipHE, foundation degree, HND or NVQ level 5
- Bachelor's degree (e.g. BA Hons, BSc), graduate diploma or NVQ level 6
- Master's or higher degree (e.g. MA, MSc, PhD, DPhil), postgraduate certificate/diploma or NVQ level 7
- None of these qualifications
- Prefer not to say

24. What qualifications, if any, are you currently studying for?

- Bachelor's degree (e.g. BA, BSc), graduate diploma or NVQ level 6
- Master's or higher degree (e.g. MA, MSc, PhD, DPhil), postgraduate certificate/diploma or NVQ level 7
- I am not currently studying for a qualification
- Other (please specify)

25. Are you now or have you previously been part of any of these programmes?

[Respondents could choose more than one answer to this question.]

- Police Now
- Inspector, Superintendent or Detective Direct Entry



- Fast Track or Accelerated Promotion Course
- None of these

Appendix C – Information sent to police forces about documents of interest to the research team

Here are some examples of the kinds of documents we are interested in collating as part of this project. The list is for illustrative purposes only – the type and extent of these documents will of course differ across police forces.

THEME	EVIDENCE	POTENTIAL DOCUMENTS
Understanding problem solving	Definition and explanation of the concept	Any strategic plan. Any force policy on: problem solving; crime concentration (repeat offenders/victimisation); neighbourhood policing; demand management; or any other document that refers to a germane policing approach (i.e. evidence-based policing or intelligence led policing).
Preparing and developing staff	Policy and guidance documents that inform staff of their responsibility for problem solving. Also anything that develops them to become more proficient in this approach	Recruitment policy; Initial or 'in service' training programmes; Reward policies/incentives.
Providing the tools to help deliver problem solving	Any documents which relate to the more effective/ efficient identification, analysis, response and assessment of problems that come to the police's attention	Any force policy on: National Intelligence Model (or intelligence process); Strategic or Tactical Co-ordinating Group; Performance Management. Any operating guidance on force intelligence system, use of analysts, PND etc. Any problem profile or other intelligence product that explores a re-occurring problem. Any guidance that informs how operational outcomes should be assessed.
Working in Partnership	Any documents which encourage/support the involvement of partners to better understand and resolve problems or reduce demand.	Any documents relating to multi-agency partnership working (i.e. MASH/ MARAC/ trafficking etc). Also any information/data sharing protocol/ policy which highlight demand management or problem solving.

Appendix D – Interview prompts

Theme 1: Respondent's role and their involvement in problem-solving

- Please describe your role
- Please describe your involvement with problem-solving

Theme 2: Doing problem-solving

- Please say something about the problem-solving work you have been part of
- What were/are the main challenges of doing problem-solving?
- What organisational support do you have for conducting problem-solving?
- What role have/do you think non-police partners/researchers/private sector play in problem-solving?

Theme 3: Attitudes

- Do you think problem-solving is something we should be doing more of to meet current forms/levels of demand? If yes, why? – what are the perceived advantages of problem-solving?

Theme 4: Problem-solving in your force

- Do you feel that your force is committed to embedding problem-solving?
- Is problem-solving more prominent in certain areas of police business? If so, why do you think that is?
- What do you think are the main barriers to adopting/spreading/advancing problem-solving?
- What have/would you do to promote/facilitate problem-solving in your force?
- What role do you think Police and Crime Commissioners have in problem-solving?

Theme 5: Related wider topics

- What do you see as the relationship between problem-solving and other prominent policing approaches such as evidence-based policing?
- Knowledge of/views on the Problem Solving and Demand Reduction Programme/ Tilley Awards



Conclusions

- We are committed to producing guidance as part of this project. Is there anything in particular you feel is needed/missing in terms of problem-solving-related guidance/resources?
- Is there anything else that you feel is important that we haven't discussed today?

ENDNOTES

ⁱ <https://www.gov.uk/government/publications/police-transformation-fund-investments-in-2019-to-2020>
Accessed on 08/02/2020

ⁱⁱ See www.popcenter.org (accessed on 08/02/2020) for a comprehensive collection of resources related, amongst other things, to the effectiveness of problem-solving.

ⁱⁱⁱ One limitation of surveys for understanding what people think about an issue is that respondents may feel that certain answers are expected or desirable, and this may affect the answers they give. One way to identify if this is happening is to include fictitious options in survey questions to provide a benchmark against which to compare the other options. In the current survey, when respondents were asked if they had heard of various different sources of information on problem-solving, one of the options was fictitious. By comparing the proportion of respondents who replied that they had used the fictitious information source to the proportions for other sources, it was possible to confirm that the results were not solely the result of social desirability bias.

^{iv} Police Now is a police graduate scheme established in 2015. See: <https://www.policenow.org.uk> (Accessed on 10/02/2020).

^v Data on the number of officers and staff at each rank as of 31 March 2019 were obtained from the Home Office Police Workforce Statistics data, available at <https://www.gov.uk/government/collections/police-workforce-england-and-wales>

^{vi} There is a long list of data sources used in one or two submissions to the Tilley Award. Examples include data from the Crime Survey of England and Wales, surveys of offenders, and fire and rescue data.

^{vii} 'Organisational development' refers to internal processes such as the development of IT systems, data sharing protocols and partnerships etc.