







Problem solving: learning and development interim practice advice

College of Policing and Problem Solving and Demand Reduction programme

Version 1.0

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Purpose

This interim practice advice has been developed to provide individuals and forces with problem-solving related information. It presents:

- an overview of the background, methodologies/methods, approaches, and theories associated with problem solving
- a learning and development framework, including suggested minimum standards, for embedding problem solving across policing
- a range of case studies that illustrate the application of problem solving
- additional supporting information and resources (Appendix).

The content has been developed through collaboration between a working group of subject matter experts, learning and development advisers, force managers and project leaders. Feedback from a workshop attended by over 70 independent force representatives also contributed to the developments of the practice advice.

The feedback highlighted two key gaps this practice advice seeks to address. Firstly, it can support the individual's knowledge and understanding of problem solving. Secondly, the framework can help forces align and/or develop relevant learning and development activity.

This advice is relatable to all aspects of policing and crime types, such as a serious organised crime and public protection. This is to encourage problem solving into all areas of policing and diminish the viewpoint that it is the premise of neighbourhood policing exclusively.

This practice advice is intended to provide an overview of problem solving and as such is not an implementation guide. It will evolve as the Problem Solving and Demand Reduction programme progresses. It will also complement other products that are anticipated to be developed and released as part of the programme (eg, a toolkit of information, POP plans and resources linked on the Knowledge Hub).

Background

While there are numerous approaches to policing, problem-oriented policing (POP) is acknowledged as an effective evidence-based policing strategy (Weisburd et al. 2010). It offers the potential for delivering sustainable solutions to recurring problems by tackling their underlying causes. This is of critical importance in an era of increasing demand.

The origins of problem-oriented policing can be found in the work of Professor Herman Goldstein and has been embraced by police forces in Europe, North America, South America and Australasia. However, while the concept is simple and straightforward in theory, it has proven to be extremely challenging to implement in practice, which leads to wasted effort and resources. This is because effective implementation of problem solving requires all elements of the organisation to be considered; individuals require new knowledge, skills, and support of good leaders, as well as an effective infrastructure (Scott & Kirby, 2012).

This interim practice advice aligns with two major policing initiatives: Policing Vision 2025 and the Policing Education and Qualification Framework (PEQF).

Policing Vision 2025 was developed with forces, police and crime commissioners (PCCs), as well as other professional bodies. A core aspect of this vision is the development of 'a professional workforce equipped with the skills and capabilities necessary for policing in the 21st Century' (Policing Vision 2025: NPCC 2014). The embedding and development of problem-solving skills are fundamental aspects to the improvement of such capabilities.

The College of Policing's PEQF underpins Policing Vision 2025. The PEQF is a standardised national framework setting professionally-related qualification levels for the police service, by rank or organisational level of responsibility. Examples of PEQF products include the National Policing Curriculum and Recognition of Prior Learning as well as linking to the Policing Professional Profiles on the Professional Development Platform. The presented framework therefore aligns and will help enhance problem solving in forces and provide a basis for learning, development and accreditation in this area.

The Police Transformation Fund's (PTF) Problem Solving and Demand Reduction programme includes learning and development as a key work stream, which is responsible for developing this practice advice. In addition to aligning content with the Policing Vision 2025 and the PEQF, the work stream embraces the application of problem solving across other PTF areas, eg, Adverse Childhood Experiences (ACEs), and across sectors. This alignment is reflected and incorporated in the presented framework.

What is problem-oriented policing?

Problem-oriented policing was originally described by Professor Herman Goldstein (1979; 1990; 2018). In essence, he argued that the police needed to change their approach in order to deliver better outcomes for the public. This entailed focusing on specific problems of public concern, often seen as recurring problems. The next stage is to understand the underlying causes that generate these problems, before thinking creatively to tailor responses to provide sustainable solutions. Goldstein further argued that to deliver such a response there should be an emphasis on prevention; use of approaches other than the criminal justice system; and involvement of those stakeholders affected by the problem (the community, other public sector, private sector, and third sector agencies). Once a response is designed, there should be effective implementation, combined with a strong commitment to assess its impact.

The difference between problem-oriented policing and problem solving

Scott (2006) points out that in its broadest sense, the term 'problem-oriented policing' describes a comprehensive framework which helps the police to achieve their mission. Others have used this philosophy creatively to influence managerial and operational elements of business. For example, if a competitive tendering process generates less expensive uniforms and vehicles, or if improved wellbeing reduces sickness levels, then these efficiencies can be used to improve the level of resources available for the front line. In contrast, the term 'problem-solving' describes the specific cognitive process that individuals use to work through a problem and, while core to problem-oriented policing, is much more limited in scope.

Why engage in problem-oriented policing?

Since the 1990s, academics and practitioners have proposed a wide variety of proactive policing approaches. These have included community policing (Manning, 1984; Bennet, 1994); intelligence-led policing (Ratcliffe, 2008); broken windows policing (Sousa et al. 2006); CompStat (Silverman, 2006), hot spots policing (Weisbard et al. 2006), evidence-based policing (Sherman, 1998), and reassurance policing (Tuffin et al. 2006). However, there are a number of reasons why problem-oriented policing should emerge as the approach to follow:

- first, POP exists as one of the few approaches evaluated as effective by the Campbell collaboration
- second, it provides a flexible framework that can accommodate all other approaches under its umbrella if they improve public outcomes
- third, the approach delivers wider benefits as it provides the only viable approach to reduce demand and calls for police service. This is because it concentrates on issues highlighted as important by the community and aims to provide sustainable solutions; and
- finally, it can improve both public and partner satisfaction and confidence, as the transparent problem-solving process is, in itself, seen to be inclusive.

Approaches and methods (methodology)

The SARA model

A number of different problem-solving models have been developed. SARA is the most commonly used model and comprises four broad stages:

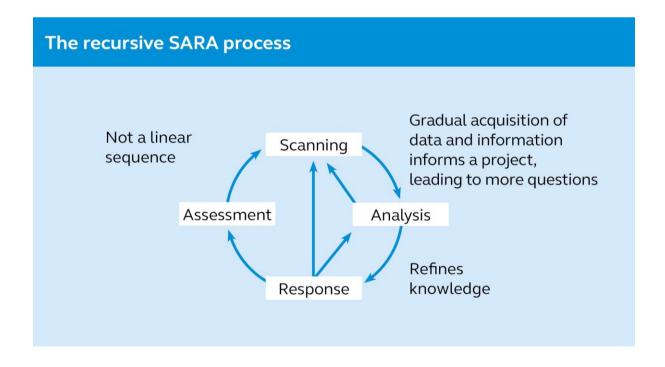
- Scanning.
- Analysis.
- Response.
- Assessment.

The SARA model is a **cyclical process** – not a linear one. It requires assessment on an ongoing basis to determine its effectiveness. This enables **responses** to be **modified**, if necessary, on a rolling basis.

SARA provides a useful structure to dealing with a problem, and while a simple model in principle, it is more complex in reality. Fluid movement between all stages should be considered. For example, **scanning** describes and quantifies the level of the problem, and **analysis** aims to identify the underlying causes of why it is occurring. If this is done rigorously, then it may establish that the original problem has been inaccurately defined, in which case alternative interventions may need to be considered.

Equally, if the implemented responses are not effective, then it may be necessary to return to the analysis to further question, 'Did we really understand what was happening?'. Using SARA as a working model should be about constantly reviewing and refining knowledge at each stage of the process. Accurate monitoring of each stage will in itself support the assessment of overall effectiveness:

- Did you understand the problem?
- Did you make an impact on the problem?
- Do you know how this worked?
- Where did the changes start to occur?
- Was it due to a police or a partnership response, or a combination of both?



Routine activity theory (RAT)

Routine activity theory (RAT) is one of the main theories of environmental criminology, developed by criminologists Felson, M. and Clarke, R.V. (1998) who worked for years on crime prevention theory. RAT states that for an incident or crime to occur, three elements must be present:

- 1. A suitable target is available.
- 2. There is the lack of a suitable guardian to prevent the crime from happening.
- 3. A likely and motivated offender is present.

1. A suitable target

The first condition for crime is that a suitable target must be available. The word target has been chosen carefully, as opposed to other words such as victim. There are three major categories of target: person, object or place.

There are plenty of potential targets around us, but not all of them are suitable crime targets. However, Professor Ron Clarke says that for a target to be of interest to an offender, it often has to have:

- VIVA: Value, Inertia, Visibility, Access; and be
- CRAVED: Concealable, Removable, Available, Valuable, Enjoyable, Disposable.

However, no matter how suitable or valuable a target is, an offence will not occur unless a capable guardian is absent, and a likely offender is present.

2. Absence of a capable guardian

The second condition is that a capable guardian whose presence would discourage a crime from taking place, is absent. A capable guardian may have a 'human element'. Often by the mere presence of another person, potential offenders are deterred from committing an offence. A capable guardian could also be Closed Circuit Television (CCTV), providing that someone is monitoring it (and potential offenders know they are being watched).

Examples of capable guardians include:

- police patrols
- security guards
- Neighbourhood Watch schemes
- door staff

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- vigilant staff and colleagues
- friends and/or neighbours
- alarms
- CCTV.

Some of the guardians are formal and deliberate, like security guards, and some are informal, such as neighbours.

It is also possible for a guardian to be present, but ineffective. For example, a CCTV camera is not a capable guardian if it is set up incorrectly or is in the wrong location. Staff might be present at a location but may not have sufficient training or awareness to be an effective deterrent.

3. Likely offenders

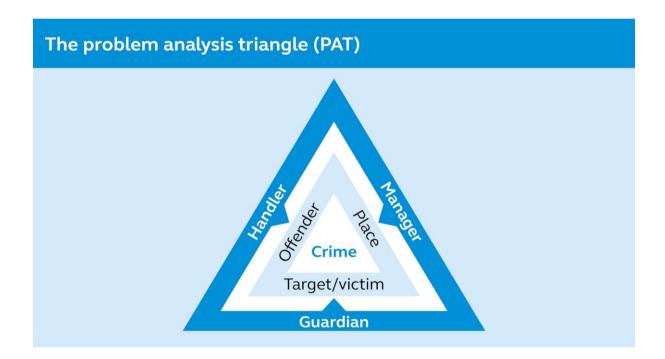
When a suitable target is unprotected by a capable guardian there is the opportunity for a crime to take place. The final element in this picture is that a likely offender has to be present.

RAT looks at crime from an offender's point of view. A crime will only be committed if a likely offender thinks that a target is suitable, and a capable guardian is absent. It is their assessment of a situation that determines whether a crime will take place.

PAT: The problem analysis triangle

RAT argues that a crime can only exist when a motivated offender comes together, at the same time and place, as a vulnerable victim, in the absence of a capable guardian. The problem analysis triangle helps this analytical process by asking the problem solver what it is about the location or individuals that facilitates the opportunity to allow the problem to take place. Once these issues are established, the model can again be used to generate potential responses to block these opportunities.

This model helps to highlight potential partners for the police, in terms of identifying the manager of the location, a handler for the offender and a guardian for the victim. Partners can be numerous and varied, for example, the Safe and Confident Neighbourhoods Strategy lists at least 15 potential partners for the police in dealing with anti-social behaviour.



Problem-solving learning and development framework

The following framework aims to help embed problem solving across forces. It consists of four headline standards:

- Foundation.
- Practitioner.
- Specialist.
- Leadership.

Each of the headline standards includes a subset of suggested minimum standards. The framework enables:

- individuals to define their learning pathway
- forces to inform their training and development approaches for problem solving.

A strategic-level standard linked to embracing and embedding problem solving as universal practice

A focused set of standards for those that are advanced or specialised in the area of problem solving



A universal standard of skills and knowledge that applies to all staff and officers

An operational standard of skills and knowledge directed at those at a service and functional level

Foundation standard

This is for all members of the police force, whatever role they conduct. It will provide an understanding as to why a problem-oriented approach is central to the effectiveness and efficiency of the force. Further, it provides a foundation for understanding how problem solving can be undertaken.

This standard is suitable for all roles within policing.



Minimum standard

Recognise the problem-solving approach: POP, background and definitions.

Understand the main principles of problem-solving methodology.

Describe the main components of the SARA model.

Understand and apply the SARA model to current situations.

Understand and apply problem solving in practice.

Recognise the value of partnership in the delivery of sustainable solutions.

Practitioner standard

This level of training/development is designed for operational personnel and those engaged in public facing problem-solving activities. It will provide officers and staff with the tools to identify recurring problems, analyse why they are occurring, tailor appropriate responses to tackle them, and set out suitable assessment criteria to understand the impact. This training standard is aimed at those who would use and apply problem solving in their roles.

This standard is suitable for police officers/staff in an operational role or context, PCSOs, and practitioner partner agencies.

Minimum standard

Recognise and demonstrate the use of problem-solving models in practice to include:

- SARA (Scanning, Analysis, Response and Assessment) model.
- Routine activity theory.
- Problem analysis triangle.

Implement and apply the main principles of problem solving, eg, the use of POP.

Examine the main components of the SARA model to apply effectively in current situations to identify root causes linked to victims, offenders and locations.

Identify and evidence problem solving to support the public in community problem solving.

Incorporate effective problem-solving methodology as part of their role.

Contribute and implement partnership/multi-agency working strategies to enable problem solving collectively.

Practitioner

Specialist standard

This level of training and development is for those who are advanced or specialised in the area of problem solving and can influence and shape a culture of problem-oriented policing through their role. It is expected that those performing this role will already have the acquired knowledge set out in the foundation and practitioner standards.

This standard is suitable for those with roles that specialise or are advanced/enhanced in the area of problem solving.



Minimum standard

Understand the SARA model and how it relates to other policing models (eg, NDM).

Embed the use of a problem-solving approach and the SARA model in everyday practice.

Support and implement a culture of problem identification, prevention and intervention.

Demonstrate specialist knowledge and capabilities to support others in the problem-solving arena.

Evaluate the use of a partnership/multi-agency approach to information sharing to manage problems collaboratively and effectively.

Understand and provide support in applying the academic theories to underpin effective problem solving.

Use different approaches of analysis and assessment when tackling the problem.

Leadership standard

This level of training/development is designed for strategic leaders within the police force. It aims to provide leaders with an understanding of the concept of problem solving and how to embed a cultural change. It also provides leaders with an awareness of how problem solving can be used to deliver sustainable solutions at a force-wide or strategic level.

This standard is suitable for chief officers, operational commanders and departmental managers.

Minimum standard

Establish how problem orientation is a core element in leading and developing the workforce, processes and practices. Be aware of how this can be used to identify and implement opportunities to influence change, innovation and collaboration.

Appraise and employ different methodologies of problem solving that improve public trust and confidence in the police.

Formulate relevant policies and procedures that promote problem solving, with due regard to issues associated with implementation failure.

Critically analyse leadership methods associated with problemsolving initiatives and practices to ensure continuous improvement.

Assess and manage the factors associated with effective partnership and governance structures with problem solving at the core.

Ensure the infrastructure and recording processes associated with problem solving support rigorous application and accountability.

Leadership

Practice advice reference list

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Weisburd, D. and Braga, A. (2006). "Hot Spots Policing as a Model for Police Innovation." In Police Innovation: Contrasting Perspectives, ed. Weisburd, D. and Braga, A. Cambridge: Cambridge University Press.

Supporting information

Case studies

A range of case studies that represent problem solving in practice based around the SARA model are available to read on the POP Center:

United Kingdom: Tilley Awards

https://popcenter.asu.edu/content/pop-awards-tilley

International: Goldstein Awards

https://popcenter.asu.edu/content/about-goldstein-pop-awards

Glossary

Keyword	Definition
80-20 rule	The principle that a few people or places are involved disproportionately in a large number of events. Based on the Pareto Principle, it emphasises low incidents are not distributed evenly.
ACEs Adverse Childhood Experiences	Adverse Childhood Experiences (ACEs) are traumatic experiences which occur before the age of 18, are remembered throughout adulthood and can have negative consequences. The experiences can range from suffering verbal, mental, sexual and physical abuse to being raised in a household where domestic violence, alcohol abuse, parental separation or drug abuse was present.
Analysis	The second stage in the SARA process, involving systematic examination of the problem to identify possible causes that might be susceptible to responses.
Assessment	The fourth stage in the SARA process, involving evaluating the effectiveness of the response. This should be undertaken through effective monitoring throughout the SARA process.

Keyword	Definition
Broken windows theory	A policy-oriented explanation of crime states that minor signs of disorder in a neighbourhood, left unchecked, can result in more severe disorder and ultimately serious crime. The principle is that small offences add up to destroy community life and that small offences encourage larger ones. Consequently, police should pay particular attention to minor disorders.
Chronic hot spots	Hot spot locations that persist for a long time.
Community mapping	 The process of developing local knowledge to understand and identify: different communities in a neighbourhood communities currently engaged with the police locally opportunities and arrangements that already exist.
Community resolution	An alternative way of dealing with less serious crimes, allowing officers to use their professional judgement when dealing with offenders. It can be used for offences such as low-level public order, criminal damage, theft, and minor assaults.
Crime and Disorder Partnership	The Crime and Disorder Act 1998 placed a statutory duty on local authorities and the police in partnership with other agencies to produce a crime and disorder reduction strategy based upon a publicly consulted audit of local issues. This is aimed at reducing agencies working in silos and to take responsibility for areas within their remit.
Crime Prevention through Environmental Design CPTED	A process to Design out Crime and influence offender behaviour. CPTED principles can be implemented during a property or building's design phase or can guide later alterations to the environment.

Keyword	Definition
Crime reduction toolkit	The crime reduction toolkit summarises the best available research evidence on what works to reduce crime. Source: http://whatworks.college.police.uk/toolkit/Pages/Toolkit.aspx
Environmental criminology	The study of crime patterns, including clustering of crime and victimisation. It incorporates a number of compatible theories, including rational choice theory, routine activity theory, crime pattern (or offender search) theory, and situational crime prevention. In short, it looks at the interaction of offenders, victims and places. Unlike traditional criminology, environmental criminologists are far less interested in questions of why people become offenders. Instead, they are interested in how offenders perceive their environment, how they make choices to offend (or not), and how we can manipulate the environment to get them to make non-criminal choices.
Environmental visual audit	Also known as patch walks whereby partners within a Neighbourhood Policing Team physically walk a local area to identify local issues, damage, graffiti, vandalism, fly-tipping. Those partners undertake to address those identified problems that fall within their remit.
Graded response	The response increases in intensity or form depending on the severity or risk of the incident.
Hot spot(s) and hot spot policing	A geographic concept. A place (or address) that has a high rate of reported crimes or calls for police assistance. There are different types of hot spots eg, acute or chronic.
	Hot spot policing is a strategy that involves the targeting of resources and activities to those places where crime is most concentrated. The strategy is based on the premise that crime and disorder are not evenly spread within neighbourhoods but clustered in small locations.

Keyword	Definition
Hypothesis	An answer to a question about a problem that can be true or false and may or may not be supported by evidence.
	Hypothesis testing can direct towards a more targeted approach in dealing with a problem.
Intelligence-led	The application of criminal intelligence analysis as a decision-making tool to facilitate crime reduction and prevention strategies.
Intervention	The response being applied to a problem (also called a treatment or response).
Motivated offender	In the routine activities approach, a motivated offender is considered a necessary part of a criminal act, along with a 'suitable target' and the lack of a 'capable guardian'.
National Decision Model (NDM)	The National Decision Model is a risk assessment framework, or decision-making process, that is used by police forces across the UK. It provides five different stages that officers can follow when making any type of decision.
Natural surveillance	An element of crime prevention through environmental design (CPTED) which involves ensuring clear sight lines.
Neighbourhood policing	 The defining features of neighbourhood policing are: Police officers, staff and volunteers accessible to, responsible for and accountable to communities. Community engagement that builds trust and develops a sophisticated understanding of community needs. Collaborative problem solving with communities supported by integrated working with private, public and voluntary sectors.
Neighbourhood Watch	Organisation of residents who provide observation of each other's property, report suspicious behaviour to the police, and take precautions to prevent crime.

Keyword	Definition
Objective	The intention or purpose. Understanding the objective(s) allows for more effective monitoring throughout the life of a POP plan.
Outcome	The impact of the response on the problem.
Outreach services	Social, legal, and health services that are brought to work with people in need, in contrast to these services that require visiting a central office. Examples include mobile needle exchanges, satellite offices of service agencies, and many community social workers providing support for the homeless and sex workers, among others.
Police Reform and Social Responsibility Act 2011, section 34	Engagement with local people A chief officer of police must make arrangements for obtaining the views of persons within each neighbourhood in the relevant police area about crime and disorder in that neighbourhood. A chief officer of police must make arrangements for providing people within each neighbourhood in the relevant police area with information about policing in that neighbourhood (including information about how policing in that neighbourhood is aimed at dealing with crime and disorder there). Arrangements under this section must provide for, or include arrangements for, the holding in each neighbourhood of regular meetings between: • persons within that neighbourhood • police officers with responsibility for supervising or carrying out policing in that neighbourhood. A chief officer should determine what the neighbourhoods are in the
Policing and Crime Reduction Research map	relevant police area. The Research Map plots details of relevant ongoing policing-related research at master's level and above. http://whatworks.college.police.uk/Research/Research-Map/Pages/Research-Map.aspx

Keyword	Definition
Predictive policing	A process of taking data from various sources, analysing them and then using the results to anticipate, prevent and respond more effectively to future crime. Often based on previous repeat offending patterns.
Process mapping	Structured analysis of a process flow to identify the key aspects and functions needed for success.
Problem	A recurring set of related harmful events in a community that members of the public expect the police to address.
Problem solving	The process of finding solutions to difficult or complex issues.
Problem analysis triangle (PAT)	A graphic showing the six principle elements of routine activity theory offenders, handlers, targets/victims, guardians, places, and managers and used to organise the analysis of problems.
Problem- oriented policing POP	Policing that changes the conditions that give rise to recurring crime problems and does not simply rely on responding to incidents as they occur or forestalling them through preventive patrols.
Rational choice theory	Set of theories examining how offenders, and others, weigh means and ends, costs and benefits, and make a rational choice.
	Designed by Cornish and Clarke, this assists in thinking about situational crime prevention, and the mechanisms of how responses work (ie, reducing rewards/provocations, increasing the effort (to commit the offence), increasing risks (or perceptions of risks) and removing the excuses.
Repeat location	A geographic area or place, which has had more than one offence during a certain period.

Keyword	Definition
Repeat victimisation	A pattern of harm suffered by a single target (person, place or object) over a period. The term has been used to refer to a series of criminal incidents related to a specific crime (ie, domestic violence or burglary); a series of various criminal incidents (ie, domestic violence and burglary); or a series of criminal incidents committed by a single or multiple offenders against single or multiple targets.
Response	The third stage in the SARA process, involving the development and implementation of an intervention designed to reduce a problem. Also a term for the preventive treatment or intervention being applied.
Root cause (analysis)	The process of identifying all the causes (root and contributing) that have or may have generated an undesirable condition, situation, nonconformity or failure. It is a structured process that strives for investigating where the problem is coming from and the likely factors that are at the origin of it. The analysis covers the identification of: • all the causes that have, or may have, produced the problem • their causal chain to the problem occurrence • their prioritisation depending on the degree of contribution to the problem, the level of criticality of the effects they produce, and finally, the degree of difficulty to define feasible solutions to eradicate them.
Routine activity theory (RAT)	One of the main theories of environmental criminology. Formulated by criminologists Lawrence Cohen and Marcus Felson, the theory states that predatory crime occurs when a likely offender(s) and suitable target come together in time and space, without a capable guardian present. The theory is supported by the crime triangle, sometimes referred to as the problem analysis triangle (PAT).
SARA	Acronym for the problem-solving process (Scanning, Analysis, Response, Assessment). This is the most commonly used methodology.
Scanning	The first stage in the SARA process, involving problem identification, verification, classification and frequency.

Keyword	Definition
Signal crimes	Some criminal and disorderly incidents function as warning signals to people about the distribution of risks to their security in everyday life. Some crimes and disorderly behaviours are thus held to matter more than others in shaping the public's collective risk perceptions. This links to the broken windows theory.
Situational crime prevention	The science of reducing opportunities for crime.
Target	The person or item an offender attacks, takes, or harms (see victim); also the focus of intervention during a response.
Target area	Location-focused of intervention of a response, such as a neighbourhood, street corner or business.
Target hardening	The process of making residences, businesses and people less susceptible or vulnerable to criminal acts through a variety of security measures.
THRIVE	THRIVE is a tool that aims to ensure that risk is assessed in a consistent way. Key considerations for assessing situations include: Threat, Harm, Risk, Investigation, Vulnerability and Engagement. The College has adopted the THRIVE definition of vulnerability.
Trend	A steady increase, decrease, or stable level of crime over time.
Troubled Families programme	The Troubled Families programme is a government scheme which provides dedicated support to families with multiple problems. http://www.eif.org.uk/publication/functional-map-troubled-families-practitioners/
Victim	A human target or the owner of stolen goods or damaged property (see target).

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Keyword	Definition
Victimless crime	An offence that is consensual between parties and considered to have no true victims, such as sex work or certain drug-related crimes. Also known as consensual crime.
Victimless prosecution	Evidence-based prosecution where there is a reluctant or unwilling victim to testify but there is evidence to support a realistic prospect of conviction – frequently used in domestic abuse cases.
Zero tolerance policy	A policy based on the broken windows theory, which highlights the importance of policing low-level disorder.

Useful resources and information linked to problem solving

Books, journals and texts

Adair, J. (2010). Decision Making and Problem Solving Strategies. 2nd ed. London: Kogan Page.

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