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1 Introduction

Written from the perspective of Law Enforcement Agencies (LEAs), this report summarises the findings from the first eight months work of the CCI consortium. The report is an overview of the four CCI focus areas chosen by law enforcement agencies (LKAs) working on Cutting Crime Impact (CCI):

- Predictive policing

- Community policing

- Crime Prevention through Urban Design and Planning (CP-UDP)

- Measuring and mitigating citizens' feelings of insecurity.

The report is based primarily on reviews of the state-of-the-art (D2.3–2.6) and is also informed by partner presentations at CCI workshops, interviews with experts and feedback from project coordinators. The report provides insight into the context and challenges facing LEAs in the CCI partner countries: UK, Portugal, Germany, Netherlands, Estonia and Spain.

The report will be read by CCI partners prior to the DesignLab in September 2019 and will support LEAs currently undertaking requirements capture research to understand specific user needs and context.

2 Predictive Policing

2.1 The Predictive Policing Model

In the late 1990s, a new technological approach to crime analysis and mapping emerged in the United States—Predictive Policing— and was gradually taken up by police forces across the world.

Definition: What is Predictive Policing?

Predictive Policing is a technological approach to informing police operations about risk of crime that originates from the United States:

> *"Predictive policing is the collection and analysis of data about previous crimes for identification and statistical prediction of individuals or geospatial areas with an increased probability of criminal activity to help developing policing intervention and prevention strategies and tactics"*
>
> *Meijer, & Wessels, M, 2019, p. 3.*

The approach was pioneered by the New York police force in 1995, under the software programme COMPSTAT—pattern-based prediction software that analyses large crime datasets and provides information about places of property crime, places of violent crime or individuals involved in criminal activity.

The commercial company PredPol grew out of a research project between the Los Angeles Police Department and UCLA. The chief at the time, Bill Bratton, wanted to find a way to use COMPSTAT data for more than just historical purposes. The goal was to understand if this data could provide any forward-looking recommendations as to where and when additional crimes could occur. Being able to anticipate these crime locations and times could allow officers to pre-emptively deploy officers and help prevent these crimes.

The Predictive Policing model—sometimes called crime forecasting—aims to predict future offending based on analysis of historical crime data and other data linked to the location, offender or victim. Predictive Policing displays information about crime risk on maps. However, it goes beyond traditional crime Geographical Information Systems (GIS) mapping approaches, in identifying and displaying heightened crime risk and seeking to manage the deployment of police officers to these areas. While GIS often represents incidents of crime on a geographical map as dots (clusters of dots represent crime 'hot-spots') or as concentrations of crime using a colour scale ('heat maps'),

Predictive Policing maps may take different forms—such as different coloured squares to represent risk.

Figure 2.1. The Predictive Policing model

2.1.1 The role of technology

Predictive policing is associated with the use of computer software employing algorithms — i.e. sets of rules for solving problems. Algorithms turn one form of data into another. In policing, this may involve transforming historical crime data into risk areas, schedules for police patrolling or lists of persons at risk of certain crime victimisation. The use of algorithms to analyse large datasets—so called 'big data"— means that computer systems often play a major role in the analysis of data. Such analysis may not be transparent to human operators. In traditional analysis systems, the relationships between data inputs and outputs are generated by hand. These are often rule-based systems, like flowcharts, where the steps, methodologies and outcomes can be traced to pre-programmed instructions created by a human. Technological advancements have resulted in systems that claim not rely on a pre-existing understanding of the relationship between data inputs and outputs. The suggestion is that more advanced algorithmic systems can tackle problems where pre-existing rules or theories do not fully capture the desired input-output relationships. This is because the input-output transformation is not defined in advance, rather that the machine creates the relationship between inputs and outputs from the data—often without regard for human interpretability. In some cases, it is argued, machines can make much more effective input-output connections—or 'predictions'—than can human-created rule-based systems (Veale, 2019).

One type of advanced algorithm associated with some Predictive Policing systems is 'machine learning'. A machine is said to 'learn' when, after being exposed to new data, it improves its performance at a certain task. This can occur through: (i) supervised learning — where an algorithm is presented with a set of training data that contains labels of observations and its learning is 'supervised' by these labels; (ii) unsupervised learning — where there are no labelled observations or predictions, but the algorithm instead looks for structure, such as clusters, which can be interpreted later; and (iii) reinforcement learning — where an algorithm is given input data, performs some action based on this data, and receives an outcome in response. This provides it with feedback it can use to improve its performance of the next action (Veale, 2019).

2.1.2 The downside of big data

Unfortunately, data quality issues are inherent to large data sets. The contents of large databases cannot feasibly be checked, and opportunities are limited when it comes to correcting for accuracy or for bias. The accuracy of Predictive Policing systems in forecasting crime can be tested as it were 'in vitro' using historical crime data. Once the system is up and running, the resulting output from the system detailing predicted crime risk levels is supposed to inform police operations, such as patrolling. If police patrolling is altered in response to information received from the system, this should be fed back into the system as it will impact offenders' behaviour and subsequent risk modeling. However, the difficulties of accurately recording police patrolling raises practical and ethical issues. Incomplete data on police patrol routes and the inaccuracy of recorded crime data combine to compromise the objective of machine learning associated with more advanced Predictive Policing systems. This reflects one of the oldest rules in computing: GIGO — garbage in, garbage out.

2.1.3 The theoretical base

Knowledge about the potential for anticipating offending comes from research and theories on offenders' behaviour patterns and motivations. Criminals follow routines, take advantage of opportunities presented to them in their immediate environment and make rational choices about whether or not to offend. They weigh up the benefits (such as money or prestige) against the potential costs (such as risk of injury or arrest). Crime levels rise when motivated offenders are routinely confronted by suitable targets that lack protection — i.e. when offending behaviour is easy and rewarding. Changes in social norms and environments may provide potential offenders with new opportunities for crime—tempting even those less motivated to offend. For example, as it became more common for women to be in paid employment and for homes to be left empty during the day, burglary increased. Since the 1970s, hot spot policing has highlighted the geographical clustering of repeat burglary offences and has identified that the risk of burglary increases if a nearby property has been burgled. In addition, this work has identified that a small proportion of offenders is responsible for a large proportion of all crime. Repeat Victimisation Theory states that after an initial offence

(burglary, domestic violence, bank robbery or theft from a motor vehicle) the risk of another similar crime in close spatial and temporal proximity increases.

In this context, the additional insight provided by Predictive Policing systems appears questionable. As a recent review of Predictive Policing states:

> *"There are at present insufficient rigorous empirical studies to draw any firm conclusions about either the efficacy of crime prediction software or the effectiveness of associated police operational tactics. It also remains difficult to distinguish a predictive policing approach from hot spots policing."*
> National Academies of Sciences Engineering and Medicine, 2018, p. S-4 in Taylor & Ratcliffe (2020)

2.1.4 Policing burglary

Predictive Policing is most often used to identify locations at high risk of burglary. Burglaries are usually reported to the police and accurate location details necessarily provided. The application of Predictive Policing to burglary enables software-based prediction tools to make use of this better-quality police recorded crime data. The results from Predictive Policing systems are used to guide deployment of police officers to risk areas. The aim being to deter offenders or catch them in the act of committing a crime. However, it might be more effective — and less resource intensive — to inform residents, dwelling owners or neighbours of burglary risk, than simply to patrol the area. Hot spot policing could equally achieve this.

2.1.5 Practical benefits

From the point of view of LEAs, Predictive Policing systems offer a number of potential benefits:

- *Better patrolling* – LEAs interviewed for CCI anticipated using data to guide police officers in patrolling the predicted risk areas or addressing with other measures the risks identified. However, there is some evidence that data on risk areas is not reaching front-line policing staff. A German article in the trade press on predictive policing reported that results from predictive policing software were not informing police operations (in one case, the PDF report giving recommendations for patrolling was not available for police officers' morning briefing).

- *Tackling falling crime rates* – LEAs interviewed for CCI stated that Predictive Policing was adopted to address rising crime rates. For example, in Germany, Predictive Policing was implemented to reduce high rates of domestic burglary. The fall in burglary rates in Germany is being reported alongside the introduction of predictive policing, giving the impression that the new technology is responsible. However, given data on the limited impact of Predictive Policing on police patrolling, reductions in burglary rates are more likely due to other measures, such as better home security.

- *Organisational benefits –* Some LEAs suggest that potential benefits of Predictive Policing may be more organisational in scope. For example, regularly updated information about connections between incidents of crime may lead to better internal communication.

- *Uncovering connections in large datasets –* The hope is that predictive software will analyse large datasets and identify connections that might otherwise be missed by police officers—due to assumptions, biases or concerns about raising sensitive issues. However, the extent to which such analysis might be considered 'predictive' is arguable.

Predictive policing – helping to prevent human error

There have been a number of cases in the UK where the authorities have failed to officially acknowledge a problem or to act on it. In one case, police failed to recognise the seriousness of a series of small incidents against an individual (who subsequently murdered by his neighbour). In the Rotherham child sexual exploitation scandal, it was found that multiple reports of children going missing and of sexual abuse were not acknowledged, connected or acted upon by the authorities—including the police. Might predictive policing help prevent mistakes of this kind? Or is this, yet again, just a job for hot spot policing?

Source: BBC Radio 4, Analysis – Predictive Police, July 2019, see report on:
https://www.bbc.com/news/stories-48718948

2.1.6 Emerging ethical issues

Predictive Policing systems have unfortunately been associated with ethical issues. In the US, Predictive Policing has raised a number of ethical issues related to police prejudice against ethnic minorities and its use of biased data. Crime hot spots resulting from these biased data sources result in a higher police presence leading to rising recorded crime rates in these areas. The likelihood of being checked by the police and getting caught for even minor offences increases and reproduces discrimination of certain socially deprived areas (Ferguson, 2018, p. 1145–1148). The use of Predictive Policing to identify individuals at risk of repeat offending is particularly concerning from an ethical perspective—a point that is discussed further in the Analysis section of this report.

Predictive Policing has been implemented across Europe, where the focus has been on the identification of locations at risk of crime and use of data is more often governed by national regulations and concerns about public reaction. The next sections discuss Predictive Policing in two contexts: (i) The Netherlands; and (ii) Germany – and Lower Saxony in particular.

2.2   Predictive Policing in the Netherlands

One of CCI's LEA partners is the National Police of the Netherlands (NPP). The Dutch police force was centralised in 2007 and a standardised national crime database established. This development enabled the creation of a data system to predict future crime from historical crime data, named the Crime Anticipation System (CAS). CAS uses statistical data from three large data sources: Central Crime Database (BVI), Municipal Administration (GBA or BRP since 2014) and Demographics from Statistics Netherlands (CBS) (Oosterloo and van Schie, 2018, p.33). CAS is an advanced algorithmic system using machine learning — it 'learns' after being exposed to new data about crime.

CAS identifies crime 'hot-spots' and 'hot-times'. CAS maps the top three percent of high crime locations in the form of 'heat maps'—a map made up of multiple squares, each 125m x125m. The map produced by CAS is passed to a 'Crime Information Exchange Point', where a team of analysts compare CAS results with information about police operations and emerging or continuing crime trends. The results are used to develop recommendations about police patrols—rather than to support a multi-agency approach aimed at preventing crime.

Predictive policing was piloted in several regions, before being rolled out nationally in 2017. In May 2019, CAS was available in 164 of the 167 base teams. In 2019, there was no published data on the extent to which it impacts police patrolling compared to crime analysis.

A multi-agency data analysis system on crime incidents in public transport exists in parts of the Netherlands (TRIAS). The system—called TRIAS—combines police data with data from public transport. Research commissioned by the ministries of Justice and Security and Infrastructure proposed combining different data sources—hoping to reduce research bias through triangulation. Importantly, the system supports a multi-agency approach to addressing risk. Such a multi-agency approach is interesting to CCI because some studies suggest that simply increasing police patrols may not significantly reduce crime or deter offenders.

What is triangulation?

In the social sciences, triangulation refers to the application and combination of several research methods in the study of the same phenomenon. By combining multiple observations, theories, methods, and empirical data, researchers hope to overcome the weakness or intrinsic biases that may come from a single method, observer or theory. The concept of triangulation is borrowed from navigational and land surveying techniques, where a single point in space is determined from the convergence of measurements taken from two other distinct points.

The Dutch police, and Dutch national and local authorities, also use other instruments that are more concerned with identifying individuals at risk of victimisation or repeat offenders. 'Risk taxation instruments' try to predict the probability of an individual (including young offenders) committing a crime or terrorist attack. The statistical prediction of rare events is notoriously difficult.

2.3   Predictive Policing in Lower Saxony

In Germany, predictive policing was introduced in 2014 in different ways in six of the sixteen German federal states. All prediction policing approaches focused initially on burglaries. This was due to rising crime rates for domestic burglary in Germany and the associated low clearance rate for such cases. Intensive media attention led to increasing pressure on political and police leadership to address the problem and allocate adequate resources to burglary prevention.

Rising burglary rates in Germany

Germany experienced rising burglary rates from 2014 onwards. Analysis of findings from the International Crime Victimisation Survey revealed that Switzerland and Denmark were experiencing a similar burglary problem. However, other countries across Europe (such as the UK and The Netherlands) had successfully reduced burglary through better urban design and planning, as well as more effective home security. The analysis of the ICVS data revealed that even simple technical security measures such as alarms reduces the likelihood of a burglary being successful.

The Landeskriminalamt (LKA) in the federal state of Lower Saxony conducted its first pilot project on Predictive Policing in co-operation with IBM. The resulting PreMap project has been running from 2016. The initial aim was to develop a mobile software application to provide up-to-date information on potential risk areas for near repeats in domestic burglary, as well as daily updated information on crime rates in specific areas. PreMap was developed without external partners because the LKA did not want to share police data with external agencies. The LKA also wanted to understand the exact functionality of the predictions and algorithms.

PreMap is a traditional rule-based software system where the relationship between inputs and outputs has been inputted—and there is no machine learning. PreMap aims to identify incidents of burglary where repeat burglary is likely to occur near to a previous incident. To identify burglaries that conform to the near-repeat approach, relevant prediction parameters are recorded by the police officers (including time of burglary, location, goods stolen and modus operandi) and entered into the LKA's case management system (NIVADIS). PreMAP calculates a score that represents the probability of a near repeat in a radius of 400m around the observed burglary within the next 72 hours. The basis

for the calculated scores was derived from empirical police data of over 70,000 burglaries from 2008 to 2013 in Lower Saxony. If the calculated score exceeds a pre-set threshold, a risk area automatically activates and visualises on an interactive map in PreMap. Specially trained officers are given the opportunity to revise the automatic prediction by manually deactivating or activating a risk area veto function. This process repeats whenever the relevant risk factors change, generating new scores and risk areas. An additional map provides an overview of the reported crimes in the area, organised by place and time for each specific offence. The officers can use this additional information about current crime trends when reviewing predictions made by PreMap.

The police coordinators are able to use the data from PreMap and crime analysis in their decisions about the deployment of police officers. In addition, the information from PreMap is made available to police offices via mobile devices. The way in which PreMap results are communicated to police officers and impact police operations is one of the aspects that is being observed during the LKA's requirements capture research.

2.4   Analysis – Predictive Policing

2.4.1 The evidence base

There remains a limited number of studies measuring the effectiveness of different Predictive Policing approaches and systems applied within police practice. The few studies that have been completed have found mixed results concerning the real-world preventive and deterrent effect of Predictive Policing.

One of the first evaluations, conducted by Hunt et al (2014) assesses the Shreveport Police Department's property crime Predictive Policing approach. This study found no statistically significant difference between the crime rates in the different districts using Predictive Policing, compared to those using more traditional policing methods. This was attributed to both the lack of statistical power of the predictions and failure to fully implement the approach (Hunt et al 2014, p. xiii–xv).

Mohler et al (2015) compared predictions made by a Predictive Policing system and those produced by crime analysts. This study conducted randomised controlled trials for the Los Angeles Police Department (US) and Kent Police (UK), which showed a decrease in crime volume within the system predicted areas, whereas areas predicted by analysts showed no significant crime reduction effects (Mohler et al, 2015, p. 1400).

A study conducted by the State Office for Criminal Investigation of North Rhine-Westphalia (2018) measured a decline in domestic burglary in districts using Predictive Policing compared to other districts. Gerstner (2018) found a decline in domestic burglary in one of the city districts where predictive policing was applied, but also found rising crime rates in other cities using Predictive Policing. The State Office for Criminal Investigation of Lower Saxony (2018) found similar results —

while some cities showed a higher decline in domestic burglary compared to those where Predictive Policing was not used, other cities showed rising crime rates despite Predictive Policing being used by the police.

The most recent study by Ratcliffe et al (2020) assessed the impact of different patrol strategies on violent and property crimes in predicted areas within a randomised controlled trial experiment. Only one of three interventions, where officers were briefed about the risk area and at least one or two police cars were dedicated only for patrolling predicted risk areas, showed a reduction in property crime as well as temporal diffusion of benefits.

Saunders et al (2016) evaluated the Strategic Subject List (SSL) approach of the Chicago Police Department (US) in a quasi-experimental design. The SSL estimates the risk of an individual likely to become an offender or victim of gun violence. However, researchers found no significant evidence of individuals on this list being at higher risk than others, but a higher probability of them being arrested when listed on the SSL (Saunders et al, 2016).

2.4.2 Ethical, legal and social issues

It is fair to say that Predictive Policing continues to be the subject of considerable controversy. Newspaper headlines have raised concerns about the impact of the technology on certain groups: "Predictive policing poses discrimination risk", "Machine-learning algorithms could replicate or amplify bias on race, sexuality and age" (16 September 2019, Jamie Grierson reports in The Guardian).

The use of Predictive Policing is particularly controversial in the US—where the "Black Lives Matter" Movement emerged in 2020 in response to issues of police racial bias. According to statistics from US law enforcement agencies, in 2018 black people were stopped by police officers much more frequently than other racial groups, and police were more likely to use force against them. Black people are also more likely to be arrested, charged and imprisoned. Data entered into Predictive Policing systems reflects biases and prejudices of the police culture and context in which the offences occurred. Predictive Policing will generally overestimate the risk attributed to minority groups and neighbourhoods potentially resulting in the targeting of certain racial communities and their environments. Innocent citizens not involved in crime may end up being targeted for police action—the so called 'false positives' of Predictive Policing systems (Media4sec, 2018–CCI Factsheet). The ability of citizens and civil rights groups to understand and review data generated by Predictive Policing systems is compromised by a lack of transparency about how such systems and algorithms actually work. In addition, the presence of police in a particular neighbourhood may reinforce feelings of insecurity and stigmatise the communities that live there.

The ethical, legal and social impact of Predictive Policing was reviewed by the CCI consortium. The ethical issues are particularly important to LEAs, and are summarised in the box below:

Ethical impact of Predictive Policing

Data selection and machine bias

- The selection of data that forms the basis of a forecast is essential. The lack of data, irrelevant data, inaccurate data, outdated data or the use of data that is otherwise of poor-quality, may lead to bad predictions.

- Historic crime data raises the question whether the resulting automated decisions are reinforcing potentially inherent bias and discrimination.

Visualisation and interpretation of forecasts

- Predictive Policing can be understood as a data-driven method for 'looking' at the probability of crime. A specific area will be highlighted where the system predicts crime is more likely to occur. If too many areas demand attention, the threshold for highlighting areas is too low, or areas are flagged on the wrong basis (e.g. "poor-quality" data), the tool will confuse rather than support LEAs.

- Furthermore, the design of dashboards and visualisation tools is both a communication design as well as a scientific issue. The manner in which data is communicated to users directly influences its comprehension, perceived priorities and the actions that will be taken.

Transparency and accountability

- In terms of trust: When using such systems, are LEAs able to clearly explain sending officers to monitor a specific location or to target a potential victim or offender of crime?

- Regarding transparency and accountability: Is the relationship between developers of software algorithms, managers of databases and the police officers on the streets in neighbourhoods clearly considered and transparent?

- In terms of data protection: LEAs generally use Predictive Policing tools that they buy from private corporations. Does ownership of data and system-generated insights remain with the state? Or will such private corporations gain the ability to create superior insights on safety and security by pooling the data from multiple LEA customers?

Stigmatisation of individuals, environments and community areas

- Individual stigmatisation can occur when, for the purpose of assessment of individual likelihood of recidivism, individuals are assessed and subsequently subjected by LEAs to different targeted approaches than they would have been without that knowledge.

- Stigmatisation of individuals in at risk communities can also occur when data analytics suggest police interventions in certain neighbourhoods. Visualisation methods that emphasise the connection between crime and specific locations may be of concern if the use of Predictive Policing results in stigmatisation of community areas. While LEAs and the general population

might already be associating certain areas of a community with more crime, the use of data to strengthen this may reinforce prejudices.

Source: Ethical, legal and social impact of Predictive Policing, CCI Factsheet,
available from: www.cuttingcrimeimpact.eu

2.4.3 Falling out of favour

At the commencement of the CCI project in October 2018, doubts had already started to be raised about the cost effectiveness of Predictive Policing. Notably, a number of LEAs have stepped away from using this technology. Use of Predictive Policing has been discontinued in the UK, where police forces are under pressure to reduce costs, and due to government austerity programmes have been cutting staff and non-front-line services since around 2010. Such developments have been reported by the UK media: "Kent Police stop using crime predicting software" (27 November 2018, Hasan Chowdbury reports in The Telegraph). Newspaper headlines in the United States were even more damning: "LAPD pioneered predicting crime with data. Many police don't think it works" (3 July 2019, Mark Puente reports in the Los Angeles Times). The Los Angeles Times went on to say:

> "…The LAPD helped create Predictive Policing has come under fire in the last 18 months, with numerous departments dumping the software because it did not help them reduce crime and essentially provided information already being gathered by officers patrolling the streets".

2.4.4 A failure to address historical problems with data quality

Previous research into crime hotspot policing — using geographical information systems (GIS) to map crime data over time — has revealed the critical importance of data accuracy. Work undertaken by members of the CCI consortium as part of COST Action TU1203 revealed issues with crime mapping systems:

- *Location accuracy of incidents –* Geographical Information Systems (GIS) process and visualise incidents in the form of 'crime-maps'. GIS overlays incidents of crime on a geographical map as coloured 'dots' (clusters of which are said to form 'crime hot-spots') or alternatively as gradations of crime levels using a colour scale (so called 'heat maps'). Data about crime incidents is generated from operational police work; including calls from the public and crime and arrest reports prepared by officers. For a number of reasons, data gathered this way often contains inaccuracies and errors (see box below for further detail). Human intervention is required to improve the accuracy of this data — termed 'cleaning the data'. However, this necessarily repetitive and labour-intensive task (involving checking crime reports for location information, modus operandi, etc, and correcting the database) tends to be neglected. In short,

the systems for collecting and recording crime were not designed to provide the accuracy necessary for effective computer analysis.

Further information: The geographical inaccuracy of crime incident data

LEA data on the incidence of crime is generated as a result of police operations. However, this dataset is a by-product, and the creation of locationally accurate data is not the main focus. When police receive an emergency call for service, the focus is on speed of response — ensuring police officers attend the incident quickly. While the caller may refer to a landmark or indicate their position on a street, this is not necessarily where the crime occurred. The location of crime incidents may be difficult to determine for some crime types. For example, thefts may not be discovered until a victim has returned home, and so they may attempt to estimate where it took place in giving their account to the police. Other incidents where no precise location is provided will be allocated a position by the recording software — in GIS systems this is usually the midpoint of a street segment. Such locational inaccuracies in the data will accumulate over time and can result in apparent crime 'hot spots' emerging in locations — especially where the midpoint of multiple streets coincide. Crime 'hotspot maps' produced by such systems are used to allocate police resources and identify priority locations for targeting crime reduction strategies. The fundamental inaccuracy of such crime data can be further obscured by the nature of the visual presentation of such data. Overlaying crime data onto detailed urban street maps leads to assumptions being made both of the accuracy of the crime data presented, and also about its relationship to features of the built environment displayed on the map. Unfortunately, such inaccuracies and assumptions may lead senior police managers, unaware of the limitations of the maps, to waste resources on crime hotspots that do not really exist. Research by the Design Against Crime Solution Centre at the University of Salford revealed that, for one UK city centre police force, 49% of crime incident locations mapped by their GIS system were wrongly located — in some cases by more than 1 Km. Using such datasets as the foundation for Predictive Policing systems appears problematic.

- *Interpretation of hotspots* **–** Police officers recognise that the results of crime maps must be interpreted carefully. For example, a 'hot-spot' for possession of drugs or drug-dealing may materialise following a police stop-and-search operation — rather than represent an increase in drug crime in the vicinity.

- *Reliance on recorded police data* **–** Information about unreported crime comes from victimisation surveys. However, police crime analysts rarely make use of such data nor do they cross reference multiple sources of data — a method called 'triangulation'.

2.4.5 Predictive Policing from a human-centred perspective

There is clearly room for improvement in crime mapping and Predictive Policing, but any decision about the collection and analysis of crime data must be carefully considered. From a human-centred design perspective, the purpose of data technologies should be to support those responsible for delivery of a role — not to burden employees with repetitive tasks or provide potentially misleading information to senior police officers. Predictive Policing adopts a technology-led approach that focuses on data analysis and pays insufficient attention to the error-laden human input required to generate such data, or the design of methods to communicate relevant insight contained in the data to police officers. The Design Against Crime Solution Centre (USAL) suggests that crime incident data be better represented in a way that does not imply (in reality, non-existent) pin-point geographical accuracy. This might be achieved, for example, by mapping crime data as coloured street segments — the street segment being the reasonable limit of accuracy in crime data. Such an approach could communicate information effectively, without requiring investment of resources in 'cleaning' the existing crime data.

2.4.6 Crime analysis — a dark art?

There is clearly a need for accurate information that is tailored to the needs of police officers to inform police operations. However, we know little about the practical work of crime analysts within LEAs and how they integrate with operational policing staff to provide 'briefing' information that supports decision-making. Such information may be in the form of printed reports, intranet pages or digital reports on mobile devices. Knowledge of how the work of crime analysts is undertaken, communicated and impacts policing operations is limited to self-report measures (Belur & Johnson, 2018). Design research is required into the delivery of this increasingly important role in data-driven policing, the quality of communications and their effective integration within police operations. Rather than simply investing in new and expensive technologies, like Predictive Policing software, that does not appear to offer significant benefits, it may be wiser to better understand and improve human-machine crime analysis processes already in use.

2.4.7 Technology-centred design

An important factor that mitigates against good human-centred design is the uncritical belief in technology as a cure all—a solution rather than a tool—so allowing technology to drive the design process. This can lead to what is termed the technology spiral, which is shown in figure 2.2 below.

The technology spiral begins with the coming together of requirements and opportunities. This can result in massive infusions of technology, often with visions of technology as a panacea.

Unfortunately, such huge changes can result in the humans in the design system being overwhelmed by inadequately planned and poorly explained changes. More importantly, users may have more

modes of operation than they know what to do with. Increased functionality for the user tends to result in much more sophisticated maintenance tasks. Finally, the increase in technology often results in the availability of masses of data about operations, maintenance, performance and productivity that managers of these systems cannot absorb—information overload is the norm in many such management domains.

A common reaction to the above problems is to infuse even more technology, as shown in the diagram. This strategy is likened to:

> "...Talking louder when someone who does not speak your language does not understand you."

> *Source: Rouse, 1991*

However, the problems are not due to the recipients of the technology but are due to the ways in which technology opportunities dictate the design process.
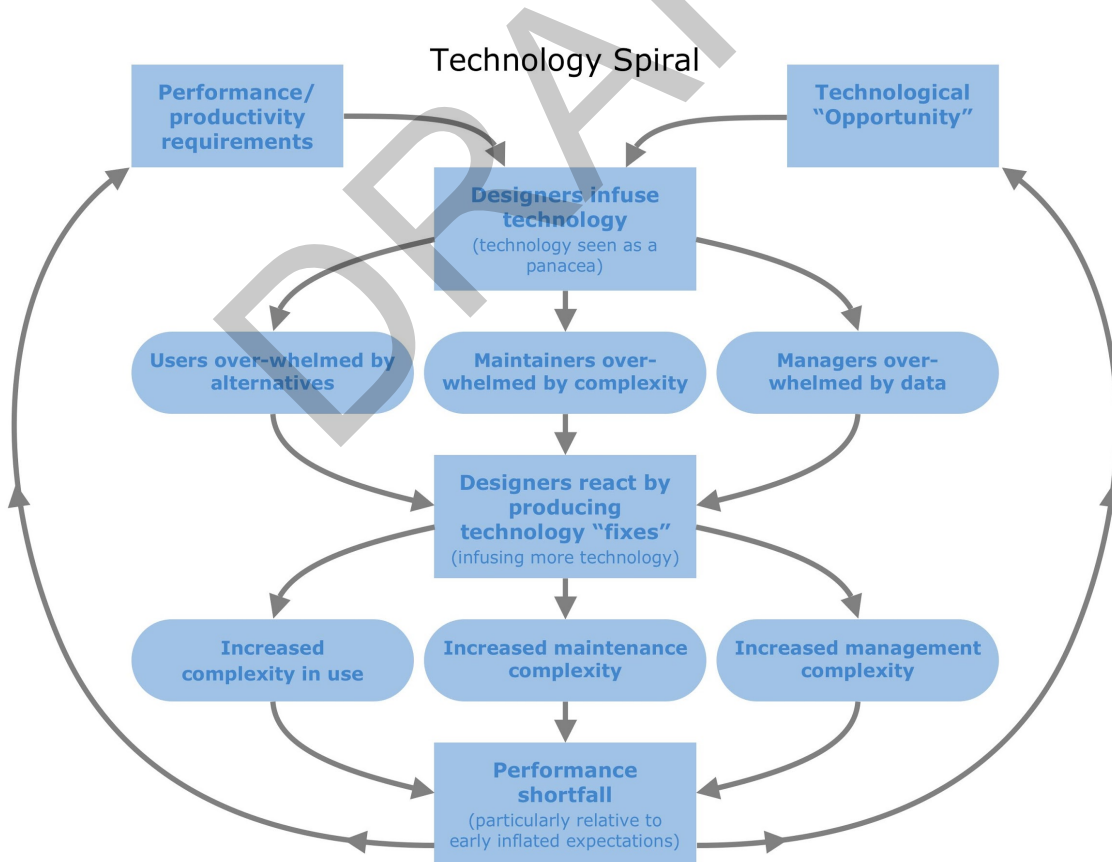

Figure 2.2. The Technology Spiral

The result is a performance/productivity shortfall—particularly in relation to early inflated expectations. Ironically, this shortfall creates new opportunities and typically, new technologies have become available offering a new panacea. Consequently, the spiral continues.

Human-centred design avoids this technology spiral by focusing on the people throughout a system, their abilities and nature of their roles, and how these can be supported. Human-centred objectives rather than technology drive the design process. So the human users, operators, maintainers and managers are not overwhelmed because a primary objective of the design process is to avoid this happening.

Technology-centred design can result in design solutions where the humans in the system (users, managers, maintainers, etc.) have to adapt and learn to accommodate the needs of the technology. In technology-centred design solutions, the human user is expected to make the effort to do things in ways that suits the technology. This means that getting the most out of the design requires the human user to adapt to the technology, which can become difficult to do when under stress (i.e. when something has gone wrong) or time pressure. Design systems that are technology-centred may fail catastrophically when problems arise, as the human user, under pressure, becomes less able to operate in an abstract, machine-like way.

The alternative is to adopt a human-centred perspective. Using this approach, any technology employed in a design system is tailored to the abilities, roles and needs of the humans in the system.

In human-centred design, effort required by the human to access and gain practical use from a technology system (i.e. learning) is made as easy as possible. The main adaptation 'effort' must be undertaken by the technology in the system, which should be tailored to meet the needs and requirements of the humans involved in the design system—who are responsible for it successfully meeting objectives.

There are examples of human-centred designs of technology systems that provide practical support for the prevention, investigation or mitigation of crime. Victims of certain types of crime may be unwilling or feel unable to report their victimisation to police (or indeed to any other authorities). Novel designs using technology have been developed to provide a human-centred alternative means of incident recording by victims — see example below. Efforts to provide appropriately designed technology systems that support human users and operators, while providing meaningful information for decision-makers, is where future investment should be directed.

Human-centred use of technology: Callisto: An anonymous reporting system

Callisto Expansion is designed to detect serial perpetrators of sexual assault and professional sexual coercion. Survivors can securely and anonymously store information about their perpetrator in Callisto. If more than one survivor names the same perpetrator, they will each be connected to a Callisto Legal Options Counsellor—an attorney who, under attorney-client

privilege, will help them understand their options for taking action to protect their community (e.g. report to police, report to HR, report to the Title IX Coordinator, go public). These Legal Options Counsellors will also help victims of the same perpetrator share information with one another and coordinate their actions.

Source: Project Callisto website, United States: https://www.projectcallisto.org/what-we-do

3   Community Policing

3.1   The Community Policing model

In the Community Policing model, law enforcement agencies (LEA) prioritise practices oriented towards the needs of citizens and local communities. The foundation for Community Policing is local officers assigned to small geographical areas or 'neighbourhoods', patrolling on foot and liaising with local residents, businesses and other key stakeholders. Officers are expected to identify problems of concern to communities and work in partnership with other agencies to solve these and prevent further problems occurring. The approach values community engagement, especially with those distrustful of police, from deprived areas or from minority groups. Police officers participate in face-to-face meetings with community groups, as well as use social media, leaflets and the like to communicate with citizens. Police officers tasked with community engagement go to great lengths to help local people.

The delivery of Community Policing requires sufficient police officers to visibly patrol and liaise with key stakeholders. Such officers need dedicated time for community engagement, partnership working and problem-solving—activities likely to be undermined by calls to respond to incidents.

The Police officer role — Responding to incidents

The police officer role involves responding immediately to incidents—usually brought to the LEA's attention by a member of the public. The common conception is that police officers respond to incidents of petty crimes, such as robbery, theft, burglary, assault and vandalism. In practice, they address a wide range of issues including: domestic violence, missing persons, mental health crises, suicide, harassment, accidents, fire, homelessness, disorder, trafficking of human-beings, terrorist threats and feelings of insecurity. Front-line police officers must cope with difficult situations and human suffering, as well as potentially putting themselves at risk of personal harm (Sutherland, 2017).

The structures in place to deliver and sustain Community Policing (role description; dedication to community policing role; size of territory; involvement in responding to incidents) significantly impacts implementation. The employment of officers or other staff (such as Police Community Support Officers – PCSOs) dedicated entirely to a Community Policing role potentially results in staff being able to fully engage with the local community and respond to their needs. However, the capacity of community police officers to fulfil their role is eroded if they are routinely expected to respond to incidents requiring immediate attention. In some LEAs, a police officer may be allocated at the start of

a shift to either a response role or to Community Policing — depending on the shift, perceived priorities, etc. This can make it difficult to sustain community contact and to problem-solve.

Community policing models advocate a consensual style of management (rather than authoritarian) to support the delivery of a proactive, partnership-working approach guided by community consultation. The current focus is on LEA 'service' delivery, with performance increasingly measured by performance targets (including confidence in policing, trust in the police, feelings of security, reduced victimisation).

There are significant differences in the management structure of LEAs and the models for delivering Community Policing, arising from both the local and national contexts. Some European countries focus on delivery of a national service, managed and funded centrally by the government, others on local police forces managed by local municipalities able to make choices about levels of funding. The LEA's specific context must therefore be explored in any requirements capture research.

Street level bureaucracy

This way of conceptualising the work of publicly funded civil servants that have direct contact with members of the general public, and who are responsible for delivering on national laws and public policies, examples include: police officers, border guards and social workers. Street-level bureaucrats act as liaisons between government policymakers and citizens and these civil servants implement policy decisions made by senior officials in the public service and/or by elected officials. Street-level bureaucrats often have some degree of discretion on how they enforce the rules, laws and policies which they are assigned to uphold.

Source: Lipsky, Michael (1969). Toward a Theory of Street-Level Bureaucracy

Some countries have a long history of Community Policing and expect the publicly-funded service to be supported by the general public—'policing by consent'. Others introduced a Community Policing model when transitioning from an autocratic regime where the police were an instrument of the state. The history of policing provides insight into the context for LEAs across Europe—especially in relation to Community Policing.

Changes in the delivery of Community Policing are difficult to monitor because job titles and roles change, and staff designated as 'community police officers may have multiple roles or be responding routinely to incidents—rather than adopting a strategic approach. In addition, quality of service delivery depends very much on personal interactions, partnerships, the framing of problems and the resulting actions and follow-up by multiple agencies. Observation, together with questioning, are vital for understanding the delivery of policing approaches on the ground.

3.2   Neighbourhood policing in the UK

The Community Policing approach originates from the UK, specifically from Sir Robert Peel who as Home Secretary established the London Metropolitan police force in 1829. Peel established a professional, uniformed police force, where constables — nicknamed "Bobbies" (short for Robert) — patrolled a geographical area or 'beat'. The notion of 'policing by consent' was important in a democratic society, reducing conflict from military intervention in riots—for example, the Peterloo Massacre in Manchester in 1819 (Emsley, 2010). Over time, policing units developed focusing on specific problems—petty crime, traffic, disorder, organised crime, terrorism and cybercrime. In contrast to other countries, British police were, and continue to be, unarmed.

Efforts to ensure that a professional and ethical police force, closely connected to the local community were inadvertently undermined by police officers being taken off the beat and put into patrol cars in the 1960s, reducing opportunities for regular face-to-face interaction with the public. From the 1970s onwards, society was becoming more multicultural, but ethnic minorities were under-represented in the police with numbers of female officers only gradually increasing. Police officers and their superiors were implicated in corruption, racism and violence against demonstrators (Higgins, 2018). Such incidents fuelled perceptions of a police force out of touch with local communities, prejudiced and as an 'instrument of the state' not to be trusted. In the UK, specific accusations of wrongdoing involving the police are addressed through official inquiries: the influential Scarman report identified the need for the police to re-engage with the public in the wake of the Brixton riots (1981)

The Macpherson Report identified the need to address institutional racism following failure to secure convictions for the murder of black teenager, Stephen Lawrence.

The Macpherson Report

Prompted by Stephen Lawrence's racially motivated death, the Macpherson Report sparked debate about policing and racism.

In July 1997, more than four years after Stephen Lawrence was murdered by a group of white youths, the then home secretary Jack Straw announced an inquiry into his death. Straw told parliament that it would "…inquire into the matters arising from the death of Stephen Lawrence on 22 April 1993 to date, in order particularly to identify the lessons to be learned for the investigation and prosecution of racially motivated crimes."

Sir William Macpherson, a retired high court judge and former soldier, was the chair. The result was a 350-page report that concluded that the police investigation had been "marred by a combination of professional incompetence, institutional racism and a failure of leadership". A total of 70 recommendations designed to show "zero tolerance" for racism in society were made. Some 67 of the report's recommendations led to changes in practice or

> the law. The abolition of the "double jeopardy rule" — which stated that people could not be tried for the same crime twice — eventually led to the 2012 conviction of Gary Dobson and David Norris for Lawrence's murder.
>
> *Source: Ben Quinn (2019) The Guardian, Friday 22nd February, available at: https://www.theguardian.com/uk-news/2019/feb/22/macpherson-report-what-was-it-and-what-impact-did-it-have*

The problem of anti-social behaviour emerged as an issue of public and political concern in the 1990s. The Crime and Disorder Act 1998 defines anti-social behaviour as acting in a manner that has "caused or was likely to cause harassment, alarm or distress to one or more persons not of the same household" as the perpetrator. Legislation was introduced to enable police to ban perpetrators from public areas or from contacting certain individuals.

From 2000 to 2010, 'neighbourhood policing' was developed to address local crime and disorder issues, reassure the public, and reconnect the police with communities throughout England and Wales. Influenced by US practice, the National Reassurance Policing Programme (NRPP) set out to address the mismatch between falling crime rates and the public's perception that the crime rate was going up—the so-called 'reassurance gap'. The approach drew on the 'signal crimes' theory, which argued that specific (but varying) types of crime and disorder — including some incidents not traditionally considered 'serious' — can disproportionately impact individuals and communities in terms of their feelings of security. The implication for the police was that by identifying and targeting the crimes, and in particular antisocial behaviour, with the strongest local signal value, they might reduce fear, improve confidence and reassure the public.

The Labour Government issued in 2004 the White Paper Building Communities, Beating Crime'. The neighbourhood policing approach chimed with New Labour's ideal of 'new localism'. The resource-intensive approach was supported by a £50m fund and the provision of 25,000 Police Community Support Officers (PCSOs). PCSOs share some, but not all of the powers of police officers. There are also special constables, who are volunteers with the same powers as police.

Her Majesty's Inspectorate of Constabulary (HMIC) reported in 2008 that all forces had achieved basic standards by making neighbourhood policing teams a 'core part' of operational policing — resulting in a national patchwork of 3,600 local teams, staffed by nearly 30,000 police officers and Police Community Support Officers (PCSOs). The perceived value of the new PCSO role has been challenged by police officers, police managers and local communities.

Tuffin et al (2006) showed that targeted foot patrol —in combination with community engagement, problem solving and perceived police fairness—reduced criminal victimisation and disorder, improved feelings of security, increased trust and improved public perceptions of policing.

In 2010, Conservative Home Secretary Theresa May was appointed to oversee a programme of sweeping police reforms by the newly elected Conservative government. Between 2010/11 and 2015/16 central government police funding reduced by 25 per cent in real terms impacting significantly on the number of police officers, including Police Community Support Officers (PCSOs) and Architectural Liaison Officers (ALOs).

In 2012, elected Police and Crime Commissioners (PCCs), along with chief constables, took the lead in deciding policy at a local level—the Home Office stepped back. The Police Foundation found that there emerged a "…looser, less specified formulation of what 'neighbourhood policing' means", and there was a "…growing diversification in the way neighbourhood policing was delivered across the different police forces (consolidation versus redesign, generalisation versus specialism, civilianisation versus de-civilianisation)" (Higgins, 2018/20). There was also inconsistent and changing use of PCSOs (Higgins, 2018/20), as well as an apparent "dissolution of the boundaries between reactive and proactive local policing" (Higgins, 2018, p. 20)

The focus shifted from high volume crimes against property (which have been in decline since the mid-1990s) to harmful crimes affecting vulnerable individuals and groups, including child sexual exploitation, historic abuse and mental health crises. Police demand increased as officers became involved in more complex, resource-intensive activities and had to deal with previously under-reported crimes, such as violence against women. New problems emerged that contributed to police demand, such as cybercrime and threat of Islamic State-inspired terrorist attacks. The Police Foundation reported that demand on local policing had intensified and changed, creating a 'perfect storm' of increasing workload and shrinking resources (Higgins, 2018). Austerity resulted in demand for mental health services being displaced onto policing as the "service of last resort".

Unwilling to increase public spending, attempts are being made to address performance problems and maintain services through better 'management' of LEAs. To this end, Her Majesty's Inspectorate of Constabulary and Fire & Rescue Service (2016) recommend LEAs implement guidelines from the newly formed College of Policing to tackle "…the continued erosion of local policing and the need for many forces to take urgent action to maintain a proactive and preventative approach to policing." (UK College of Police, 2018c, p. 5) (UK College of Policing, accessed 7 June 2019 – established in 2012). The evidence-based guidelines outline the essential elements of neighbourhood policing but leave the question of how to deliver neighbourhood policing in a time of austerity to the discretion of LEA chief police officers.

3.3   Neighbourhood policing in Greater Manchester

CCI's LEA partner Greater Manchester Police (GMP) deals with more priority incidents relative to population than any other force, recording almost 335,000 crimes in 2018. GMP police officers deal with more crimes per officer than the average of comparable metropolitan forces in London. There is growing complexity in investigations and safeguarding, with more on-line crime and harassment, as

well as 18,500 mental health incidents and almost 46,000 domestic abuse incidents. GMP is also monitoring 3,500 sex offenders (HMICFRS, accessed 23.05.19). Around 20 percent of GMP police radio time is spent dealing with mental health issues and missing persons.

The Mayor of Greater Manchester is appointed as Police and Crime Commissioner of GMP. In March 2018, "Standing Together: Greater Manchester's plan for safer, stronger communities", was published (HMICFRS, accessed 23.05.19). GMP has lost over 25 percent of its workforce in the last eight years due to government policing budget reductions. Between 2011/12 and 2017/18 GMP made savings of £215 million and has to find further anticipated budgetary savings of £63.6 million by 31/03/2023 (HMICFRS, accessed 23.05.19). Since 2010, GMP has lost around 2,000 police officers and 1,000 staff and Police Community Support Officers (PCSOs) (Greater Manchester, 2018). Nearly 50 percent of its current police officers have less than two years' experience. There are between 3 and 5 police officers plus Police Community Support Officers (PCSOs) covering 15,000 residents.

Trust in police is increasing, but satisfaction with the police service is falling. This may be because limited resources mean that police are unable to investigate certain types of crime. In 2013, Sir Peter Fahy, Chief Constable of Greater Manchester Police, reported that officers were concentrating on about 40 percent of reported crime—other UK police forces were doing likewise (BBC News, 2013).

GMP is attempting to improve its performance by further restructuring and reinvesting in middle managers tasked with linking with police officers and building partnerships with other agencies. The aspiration is for neighbourhood police officers to work more closely with health and social care teams; a significant development worth observing.

On 22 May 2017, a suicide bomber—a radical Islamist—detonated a homemade bomb as people were leaving the Manchester Arena following a concert by the American singer Ariana Grande (GWS, accessed 28.05.19). The bomber was a 22-year-old local man of Libyan ancestry. Police believed the bomber had largely acted alone, but that others had been aware of his plans (Casciani, 2018). The potential for Community Policing to uncover problems of radicalisation and potentially provide 'early warning' of possible terrorist activity is another reason for greater investment in Community Policing in the UK. In Greater Manchester, the aftermath of the Manchester Arena terrorist attack was used to build community cohesion. The "We Stand Together" charity was established to celebrate differences, fight hatred and intolerance and help build a safer and stronger country. GMP was at the forefront of this initiative (see https://www.westandtogether.org.uk/who-we-are/).

3.4   Community policing in Lisbon

CCI's partner Camara Municipal de Lisboa (CML) is a specialised body of the Lisbon Municipality comprising municipal police officers and civilian staff—700 workers in total. CML's mission is to ensure compliance with all laws and regulations relating to local authorities' competences (e.g. oversight of road traffic, public space, nature protection, commerce, construction sites and municipal housing),

contributing to the protection of local communities and the improvement of citizen's quality of life in the city of Lisbon. CML is not responsible for investigation of crime in the area—which comes under the jurisdiction of the national police forces operating in the Lisbon area.

Municipal police officers recruited by CML come from one of Portugal's national police forces. A police officer appointed by CML is expected to remain with the municipality for up to 9 years—in practice, some officers remain much longer. The police officers working for CML must possess qualities suited to the role, which involves engaging with the local community. The fact that the role fully embodies the principles of Community Policing and represents a long-term commitment to local citizens comes from the unique approach adopted in Lisbon.

In 2008/09, CML started to develop a Community Policing approach. Together with local organisations and representatives, CML set up a local safety partnership or join a community group already in existence. The local safety partnership members work together to identify the profile of the community police officers to be recruited — two officers are allocated to each territory. CML administer psychological tests to better understand the officer profiles and help them select a pair of recruits that are compatible. The safety partnership members and the two community police officers attend training on safety and security together, learning through the process about the partners and the local territory. The local safety partnership meets every month to identify issues, determine actions and monitor progress.

Lisbon's unique Community Policing approach was set up by a team that included two social scientists and was inspired by UK practice. In 2008, the social scientists visited community policing operations led by the Metropolitan police in London, as well as reviewed good practice being developed in the US. The first safety partnership was established in Alta de Lisboa on the northern edge of Lisbon—a 300 acre neighbourhood comprising 60,000 inhabitants (see http://sgal.altadelisboa.com/en/). CML joined a pre-existing group—the Community Group of Alta de Lisboa (GCAL). The Group comprised public and civil society organisations operating in the neighbourhood and representatives of local residents (from social and private housing). GCAL recruited and trained two municipal community policing officers that met their criteria, and who subsequently participated in their monthly meetings. The actions to address the problems identified were implemented through the project 'Safer Alta de Lisboa'. Through development of shared responsibility, trust and engagement of the local community in the planning, implementation and evaluation of community policing, the project promoted a preventive, problem-solving approach to local issues related to the management and maintenance of the local area. Lisbon is the only municipality in Portugal to adopt a Community Policing approach, where community policing officers are expected to meet regularly with partners in a designated territory to help address issues of concern to the local community. Local community concerns often relate to urban management and maintenance—such as fly tipping, litter, abandoned cars and so on.

Community Policing in Lisbon is small-scale but strategic and community-led, differing from the UK's standard approach in that a local safety partnership recruits two community police officers for its

territory, who they work with over the longer term through monthly partnership meetings. The community police officers come to have an in-depth understanding of their specific territory.

Community Policing is delivered using officers dedicated to the role, allocated to a specific territory—i.e. they are not rotated. CML currently employs 18 community police officers—a pair of officers being assigned to each of the 9 territories currently adopting the approach. The Lisbon Municipal Council incorporated Community Policing into the city's goals, to extend the projects of the Lisbon Municipal Police to more neighbourhoods (2018–2021 Multi-year Plan of Lisbon City, 2017).

CML only set up a local safety partnership if requested by local partners. CML builds trust with community representatives and organisations by pointing out that community police officers and other staff employed by the municipality are not responsible for the investigation of crime. Community police officers inform national police agencies of criminal activity in their territory—for example, drug dealing, domestic violence, etc. CML is located at headquarters in the Northern part of Lisbon. Community police officers travel to their allocated territory in a police car or on a bike, often parking within the premises of the National Police in that area. The community police officers make use of safety partnership members' resources and local facilities (e.g. libraries) to meet with local residents and representatives.

3.4.1 National police forces – proximity policing

The municipality of Lisbon (Portugal's capital city) is policed by a number of national police forces. The Public Security Police (PSP) is generally known for policing urban areas with uniformed police officers, while rural areas are normally policed by National Republican Guard (GNR)—a gendarmerie force. The PSP and GNR are responsible for conducting criminal investigations.

What is a gendarmerie?

A gendarmerie or gendarmery is a military component with jurisdiction in civil law enforcement. The term gendarme is derived from the medieval French expression gens d'armes, which translates to "armed people". In France and some Francophone nations, the gendarmerie is a branch of the armed forces responsible for internal security in parts of the territory (primarily in rural areas and small towns in the case of France) with additional duties as a military police for the armed forces. This concept was introduced to several other Western European countries during the Napoleonic conquests. The growth and expansion of gendarmerie units worldwide has been linked to an increasing reluctance by some governments to use military units typically entrusted with external defence for combating internal threats. Some of the more prominent modern gendarmerie organisations include the

French National Gendarmerie, Spanish Civil Guard, Italian Carabinieri, Portuguese National Republican Guard and the Turkish Gendarmerie.

The National Republican Guard (GNR) (Portuguese: Guarda Nacional Republicana) is a military force responsible for the policing and investigation of crime throughout the outer areas of Lisbon District. These include the areas of Alenquer, Mafra, Sintra, Torres Vedras and Vila Franca de Xira. The GNR investigate crimes such as burglaries, other thefts, street robberies, shoplifting, drug trafficking, minor assaults, domestic violence, theft of items from vehicles and more minor crime. Investigations are directed either at one of the five divisional units or the more serious ones at the Lisbon Territorial Command Headquarters.

Established in 1911, the GNR is responsible for preventative policing and highway patrolling in the countryside and small towns of Mainland Portugal. In peacetime, it is dependent upon the: (i) Ministry of Internal Affairs, for the purposes of recruitment, administration and performance of duties arising from its general mission, and on the (ii) National Ministry of Defence, for the purposes of standardisation and regulation of the military doctrine, arms and equipment. The GNR's mission is maintenance of public order, within its area of jurisdiction exercised mainly through the policing of all areas in the country—except for the larger cities which come under the jurisdiction of the PSP (Safe Communities Portugal, accessed 28.06. 19)

Established in 1867, the Public Security Police (PSP) (portuguese: Polícia de Segurança Pública) is commanded by a National Director responsible to the Minister of Internal Affairs. Its overall responsibilities are ensuring democratic legality, safeguarding internal security and the rights of its citizens in accordance with the constitution and laws of Portugal. In terms of policing, the majority of Lisbon is under the jurisdiction of the PSP Lisbon Metropolitan Command—responsible for urban areas. Apart from its headquarters, the Command comprises a number of specialised divisions covering criminal investigation, traffic, and security installations. The land area is divided into five divisions that cover the central part of Lisbon as well as six divisions covering the outer areas, namely: Amadora, Loures, Vila Franca de Xira (town only), Oeiras, Cascais and the central part of Sintra. In addition the PSP Metropolitan Command is responsible for policing Lisbon's International airport.

With the transition from a military dictatorship to democracy occurring in 1975, national police in Portugal introduced a community policing approach relatively recently, in the form of the Proximity Policing Model. The dictionary definition of Proximity is "nearness in space, time, or relationship" and the term is used in countries such as France and Spain. Proximity Policing aims to act proactively, through the presence of visible police, to bring the police and citizens closer together:

"…Improving the relationship between them and guiding police action towards solving community problems, in order to make the police and the citizens active elements in crime prevention and community safety, in a joint effort to improve safety and quality of life."

(GNR, 2019, translated from Portuguese)

In the performance of its duties, the GNR is:

- Promoting an integrated policy of crime prevention and containment

- Strengthening local partnerships with government bodies, local authorities and civil society, particularly non-governmental organisations, private initiatives, foundations, businesses and others, with a view to taking a more effective approach to the specific needs of each community

- Coordinating joint and effective action by all the Ministry of the Interior's bodies and institutions aimed at the implementation of the various partnership programmes

- Fostering citizens' responsibility and participation

In terms of delivery, a variety of programmes and groups have been established related to specific aspects of safety and security, including: Safe Residence; Safety for the Elderly; and Safety for Shops and Businesses; and Safety for Schools.

- Proximity and Victim Support Teams (EPAVs) have been established and tasked with responsibility for proximity policing. EPAVs are responsible for: crime prevention and surveillance in commercial areas; surveillance in residential areas—especially those inhabited by elderly citizens; prevention of domestic violence; support for crime victims and post-victimisation monitoring; identification of problems impacting the security of citizens; and the detection of unreported crimes

- The Safe School Program Teams (EPES) are responsible for security and surveillance in school settings; prevention of juvenile delinquency; detection of problems that may impact the security situation of citizens; and the detection of unreported crimes within school communities.

The Proximity Policing model very much informs the way in which the National Police positions itself as a 'service' dedicated to ensuring citizen satisfaction. According to the Comandante Metropolitano da PSP de Lisboa, National Police Superintendent Jorge Alexandre G Maurício:

"…We would like to convey a promise of a permanent effort, dedication, and the delivery of a public service that enhances the quality of life for all citizens. This is what motivates this team that works 24/7 on public roads and permanent service in their Police stations. We intend to be always available, with rapid responses in a close relationship, but also enormous proactivity and efficiency, ensuring the safety of all. The PSP of Lisbon exists to serve the community and providing satisfaction is our motivation."

(Safe Communities Portugal, accessed 01.07.19)

> **Criminal investigation – the different LEAs operating in Lisbon**
>
> In addition to the GNR and PSP, there is the Judicial Police integrated within the justice system. Serious crime is the responsibility of the Judicial Police – Lisbon and Tejo Valley.
>
> The different roles of the national police in dealing with and investigating criminal cases are explained on the website to help everyone needing to report suspicious activity: https://www.safecommunitiesportugal.com/report-suspicious-activity/

3.5   Analysis – Community Policing

3.5.1 Community policing works

The aspects of Community Policing that are core to its delivery — such as police officers patrolling local communities on foot — has been shown to be effective. A Home Office report by Tuffin et al (2006) found that targeted foot patrols work, when combined with community engagement, problem-solving and perceived police fairness. Community policing helps to reduce criminal victimisation and disorder, improves feelings of security, increases trust and improves public perceptions of policing. A systematic review concluded that neighbourhood policing in the UK has been effective at reducing public perceptions of disorder, increasing trust and confidence in the police and increasing the perceived legitimacy of the police (Gill et al, 2014).

Community Policing remains a prominent issue on the political agenda (Oliver, 2000). Its principles — the fostering of trust, confidence and legitimacy — are in line with the fundamental values of contemporary democracies (Gstrein et al, 2019) and go largely uncontested by the general public, the media and academics (Oliver, 2000). From a theoretical standpoint, community policing is flawless and neat. Its implementation and delivery in practice, however, is seldom straightforward.

3.5.2 Community Policing and police culture

Community Policing is implemented by front-line officers who are part of complex organisations and who are charged with delivering such principles within even more complex social contexts. While the concept of community policing is widely accepted, police officers' acceptance of its principles is far from unproblematic.

It has been consistently identified that the resilience of traditional police culture can negatively impact police officers' perception of community policing, therefore acting as an obstacle to effective implementation (Irving et al, 1989; Bennett and Lupton, 1992; Sadd and Grinc, 1994; Skogan et al, 1999; Novak et al, 2003; Long et al, 2012; Myhill, 2012; Cosgrove and Ramshaw, 2015; Cosgrove,

2016; Mastrofski et al, 2016; O'Neil, 2019). This issue seems not only to affect different countries, but also appears to persist over time.

While police culture is far from homogenous and universal (Paoline, 2003; Moon, 2006), there is broad consensus that some of its most defining features include a focus on crime fighting, isolation from the general public and a strong loyalty towards colleagues (Paoline, 2003). These features are not easily compatible with the community policing approach (Moon, 2006), since the latter emphasises cooperation between police and citizens and prioritises preventative actions over reactive responses to crime.

To many police officers — irrespective of their rank, background and experience — Community Policing is 'second class' police work, whilst crime fighting, punitive policing remains the most legitimate police remit. Several UK-based studies have explored the cultural resistance towards Community Policing within police forces and stressed the lack of professional status of community policing roles, which are often considered inferior (Irving et al, 1989; Bennett and Lupton, 1992; Myhill, 2012; Cosgrove and Ramshaw, 2015; Cosgrove, 2016; O'Neil, 2019). This issue does not appear to be confined to the UK. There is evidence that cultural resistance from police officers is also one of the main challenges to the implementation of Community Policing in the US (Sadd and Grinc, 1994; Long et al, 2012; Mastrofski et al, 2016; Skogan et al, 1999), and beyond (Weisburd and Amir, 2002; Topping, 2008).

3.5.3 The concept of trust

Community Policing appears to start with the notion of 'visibility'. However, community policing goes beyond the potentially narrow definition of this term (i.e. the ability to be seen), as citizens must be able—and be willing—to engage in face-to-face contact with community police officers (and vice versa). Thus, while the term 'visibility' may often be used, what is actually required is "the potential for engagement"—explaining why foot patrol is better than vehicle patrol. Medina (2011) suggests that participation of the public in this community-oriented policing model can be problematic. Citizens must want to participate, be able to participate and understand how to participate. But even before that contact can take place there must be trust. The officers should trust the citizens' (and the information they give) but probably even more important is that citizens should trust the police. If citizens do not trust the police, they will be less willing to contact officers, and may be unwilling to talk to them openly, in public. Trust implies a kind of social contract, a two-way dialogue. Citizens must believe the police to be fair, just and honest, more or less following community rules, norms and expectations—not only formal written laws. Police officers wedded to a punitive, law enforcement role are less likely to be trusted by citizens. While in many police models, 'trust' is seen as a beneficial result of Community Policing, trust may equally be seen as an important prerequisite for effective Community Policing.

3.5.4 Problem-solving in the community

Community police officers are expected to adopt a proactive, problem-oriented approach that goes beyond simply engaging with citizens. This involves officers identifying, defining and assessing problems in partnership with key local stakeholders. Through problem-solving, Community Policing has the propensity to be proactive and prevent crimes from occurring in the first place. However, problem-solving requires a shift from a reactive to a proactive, strategic approach that can be difficult for LEAs required to be responsive to emerging problems. Experience tells us that the implementation of problem solving is far from straightforward. Bullock and Tilley (2009) draw attention to the many obstacles identified over 25 years of experimentation with the principles of problem-solving.

3.5.5 Terrorism and Community Policing

The impact of terrorist threats on Community policing are varied and complex. We can see that terrorist attacks by ETA made Community Policing difficult to implement in Spain. It also resulted in a political focus on counter terrorism in Spain—possibly at the expense of Community Policing. In addition, the threat of terrorism can have the effect of changing the police model and working methods, resulting in a return to 'hard-policing' and even the increased militarisation of policing. For a while, the adoption of a hard approach (a "war on terror") may be reassuring to the general public, but in the long run it may undermine the perceived 'approachability' of the police. Reduced approachability implies the police losing their connection to the public, considering the community perspective less, and also becoming distrusted—particularly by some sections of the community.

Following a terrorist attack, LEAs can actively promote community engagement. In Greater Manchester, the aftermath of the 2017 Manchester Arena terrorist attack was used to build community cohesion. The "We Stand Together" charity was established to celebrate difference, fight hatred and intolerance and help build a safer and stronger community. Greater Manchester Police was at the forefront of this initiative, which involved Chief Inspector Umer Khan—later awarded an Order of the British Empire (OBE) for his work. There have been a host of community events under the campaign and the hashtag continues to be used at national events (see https://www.westandtogether.org.uk).

3.5.6 Managing austerity

The problems facing policing in the UK today arise from austerity, combined with increasing demand for police services. The budget cuts that have been made to community policing are surprising, given evidence that community policing works (Gill et al, 2014).

The UK's College of Policing guidance touches only briefly on the challenges facing police forces due to cuts in funding or increased demand. Indeed, the guidelines are explicit in their attempt to remain

neutral regarding UK public spending cuts, reductions in staffing and police restructuring initiatives. How Community Policing in the UK may develop in the future as policing cuts continue to bite is not known. The aspiration to stick with the Peelian principles that form its foundation will prove increasingly difficult to maintain if recent rises in demand for police services continue.

The current strategy involves embedding a community-oriented approach within police structures by incorporating the principles within organisational mission statements, strategies and performance management systems. Integration into LEA policies and procedures is intended to support the delivery of community policing—but can have unintended consequences. For example, police managers may focus on quantitative targets at the expense of achieving qualitative outcomes. This is problematic for community policing because it is very much about complex problems, softer social behaviours that are more difficult to capture or measure.

3.5.7 Community Policing approaches

Country – context	Current term
UK *Part of 'policing by consent' in a democratic country*	*Neighbourhood Policing*
Portugal *Transition from military dictatorship to democracy from 1975 onwards*	*Proximity policing* and *community policing*
Spain	*Policía de Barrio* — literally, 'Police of the Neighbourhood'
Germany	*Bürgernahe Polizeiarbeit* — literally, 'Citizen-near police work'
The Netherlands	*Gebiedsgebonden politiewerk* —literally, 'Territorial police work'
Estonia *Occupied by the Soviet Union until restoration of independence in 1991*	*Piirkonnapolitseinik – Literally, District Police Officer* *Estonian: Politsei- ja Piirivalveamet* — Police and Border Guard

Table 3.1. Community policing in CCI LEA partner countries

Community Policing has been adopted across the world, although terms used vary between countries and have been altered over time (see box above). In the UK, Community Policing originates from Sir Robert Peel's reform of policing in 1829 and the establishment of a London Metropolitan Police Force. Since then, various programmes of reform have aimed to tackle issues such as corruption and racism, as well as to shift focus back onto addressing the perceptions and concerns of local communities. A similar process of policing transformation has occurred in the Netherlands. The Dutch police had to contend with cases of corruption in Amsterdam in the mid-1970s and there were efforts by police inspectors to promote a less hierarchical, more "listening to people" style. From 1979 onwards, there was also a shift towards crime prevention.

In countries such as Portugal and Spain, the introduction of Community Policing is a more recent phenomenon, implemented through projects, initiatives and the establishment of police teams tasked with Community Policing. The approach involves a shift from: (i) formal law enforcement (administering written laws and the justice system) to informal small groups and neighbourhood rules (involving norms and values of the street); and (ii) a technical and instrumental approach to a more client-focused or even human-centred approach. Indeed, it could be argued that Community Policing can only really be effectively delivered within a democracy. This partly explains why Catalonia in Spain and Lisbon in Portugal—former dictatorships—only started to introduce Community Policing in the 1990s.

The review of the state of the art highlights the importance of understanding Community Policing within a historical context, as well as recognising that how community policing is delivered varies significantly between local and national contexts. Consequently, the CCI project is focused on the development of Community Policing tools tailored to the specific needs and contexts of GMP and CML.

4   Crime Prevention through Urban Design and Planning (CP-UDP)

What's in a name?

The term Crime Prevention through Urban Design and Planning (CP-UDP) was adopted by EU COST Action TU1203 in 2014 to better engage professionals from the disciplines of urban design, planning and management—including maintenance—in the strategic prevention of crime in urban environments. CP-UDP emphasises the importance of embedding crime prevention into existing design and planning policies, processes and procedures.

Source: EU Cooperation in Science and Technology Action TU1203 – see http://www.costtu1203.eu

4.1   The CP-UDP approach – Architectural Liaison Officers (ALOs)

The role of the urban environment in generating opportunities for crime and disorder is widely recognised. Front-line officers will have observed that crime clusters around particular types of development (schools, train stations, etc.), note how offenders make use of the environment to offend and may even blame architects or planners for designing environments vulnerable to crime. Police officers may also be aware of how crime is being 'designed out' of existing or new urban developments — sometimes with the help of LEAs.

In the UK, LEAs employ staff to engage with architects, planners and developers on safety and security. Traditionally, these staff were referred to as Architectural Liaison Officers (ALOs). However, job titles have been altered over the years to Crime Prevention Design Advisors (CPDA) or Designing Out Crime Advisors (DOCAs). The term ALO is a generic name for LEA representatives providing crime prevention advice based on Crime Prevention through Environmental Design (CPTED) principles and is recognised across Europe. The term ALO is used to refer to such LEA staff throughout this report.

ALOs are often ex-police officers trained in how the urban environment generates opportunities for crime and how the application of Crime Prevention through Urban Design (CPTED) principles can help reduce the likelihood of problems arising. In order to engage with architects, developers and planners, police ALOs learn to read development plans that detail a proposed design, identifying from the plan features likely to foster crime or anti-social behaviour. They also recommend changes to the design that address vulnerability to crime without increasing feelings of insecurity amongst users.

In some cases, ALOs may have a professional background in the development industry (e.g. as planners; architects; etc.), and so are better able to understand and engage with the architects, developers and planners to whom police provide advice. Their background also enables these ALO to recommend design changes that are more sensitive to the context and to the need to meet other requirements—usability, aesthetics and so on.

The ALO delivers advice to the development industry in a variety of ways. The ALO can provide an architect or developer with information about the crime risks related to their proposed development. The architect or developer may request safety and security information when applying for planning permission. Information about crime risks, as well as recommendations for addressing these, is often presented in a report — in the UK, this is sometimes referred to as a Crime Impact Statement (CIS). Impact Statements are a recognised tool in the development industry, being a standard way of ensuring that development proposals address key priorities and requirements (for example, fire safety impact reports, environmental impact reports, traffic impact reports; etc).

In Manchester (UK), Local Planning Authorities may require developers to submit a Crime Impact Statement (CIS) when applying for planning permission. In preparing the CIS, the ALO will research the location of the planned development (including crime incidents, social deprivation, and local policing issues) and review plans for the proposed building layout. Working for an LEA, the ALO has access to detailed recorded crime data and intelligence from local police officers regarding any emerging problems. Supported by a police crime analyst, the ALO can produce a CIS that includes standard crime data tables, crime maps, and graphs of changing problems over time. Ideally, the ALO will visit the proposed development site to better understand the local context. The ALO evaluates the vulnerabilities to crime associated with the proposed development. Drawing on CPTED principles and standards, the ALO provides recommendations for the architect on how to address crime risks, referring to existing standards for the safety and security, such as Secured by design. The ALO may liaise and provide advice to architects via email, telephone or face-to-face. The ALO indicates in the CIS that the LEA will support the developer's application for planning permission — as long as any highlighted crime risks are addressed and recommendations followed.

Whether CP-UDP advice is required for planning permission (e.g. via a CIS) depends on the municipality or Local Planning Authority. ALOs therefore normally will dedicate time to engaging with local planners and municipalities in order to encourage them to engage in CP-UDP — for example, by requiring CIS for all major developments.

In some places, there are schemes to support the accreditation of buildings that comply with agreed standards for safety and security — such as Secured by Design (UK); Police Label Secure Housing (NL). ALOs may be employed by the LEA to assess the compliance of development proposals with such a standard. In some cases, the ALO may assess the building once its been completed to 'sign off' compliance with the criteria laid down in the standard. Developments judged to meet the required standard are then accredited or certified.

Some police ALOs liaise with planning authorities and developers to discuss general safety and security issues at the master planning phase — i.e. at the area level, before development of detailed building plans.

4.2   CP-UDP theories – Crime Prevention Through Environmental Design

ALO training and advice draws on theories of Crime Prevention Through Environmental Design (CPTED — pronounced 'sep-ted'). CPTED was first coined by the behavioural scientist, and criminologist C. Ray Jeffery in his 1971 book of the same title. The contribution of the well-known journalist and critic of 'modern urban design', Jane Jacobs as well as the work of the US architect Oscar Newman, added planning, design, and architecture to CPTED theories. UK and USA criminologists like Pat Mayhew, Ron Clarke and Marcus Felson introduced the situational approach and the idea that 'opportunity' should be understood as a cause of crime. The role of opportunity in enabling behaviour is demonstrated in relation to rates of suicide—which declined when suicide became more difficult when coal gas used in domestic ovens was changed to non-lethal natural gas. Opportunity reduction measures for suicide (e.g. selling paracetamol in limited quantities) are now standard.

CPTED research has developed general principles for the design of safe urban environments covering six areas:
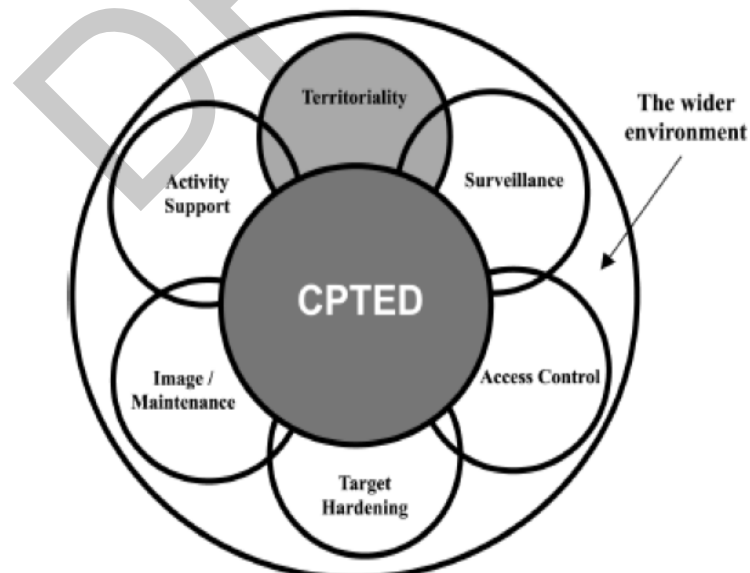

Figure 2. *The Component Aspects of CPTED*
(Source: Adapted from Moffat (1983) p.23)

4.3   CP-UDP across Europe

The implementation and operation of CP-UDP took off in northwest Europe in the 1980s with accreditation schemes like Secured by Design in the UK and the Police Label Secure Housing in The Netherlands. The delivery of such schemes is supported by ALOs employed by police, local authorities or accreditation agencies. More recent developments in CP-UDP include:

- German guidelines and security partnerships in a number of German federal states

- In Lower Saxony, an CPTED accreditation scheme for residential dwellings

- The Estonian EU-funded CPTED training of police, NGOs and local authorities

- The Estonian Safe House Label

These accreditation schemes are voluntary and rely on a developer choosing to apply for accreditation—or the client specifying that the new or refurbished development should comply with CPTED principles.

As discussed above, an obligatory approach is implemented by the Greater Manchester Police (Design for Security) with the Crime Impact Statement (CIS) as a tool. In France, the Loi d'Orientation et de Programmation de la Sécurité (LOPS) makes it compulsory for large construction projects to conduct an analysis on the impact of a proposed development on crime: The ESSP (Etude Sécurité et Sûreté Publique). There have also been successful attempts in the Netherlands and the UK to integrate crime prevention into the national Building Code, national laws and local planning regulations.

Since the mid-1990s, a body of knowledge at the European level was established: a set of voluntary standards and guidelines issued by the Technical Committee 325 (TC 325) of the European Committee for Standardisation (CEN). This brings together the National Standardisation Bodies of 34 European countries to produce a set of guidelines issued as 'CEN 14383 documents.' An implementation handbook—Safepolis (2008)—made working with these documents easier. In 2018, the Czech standardisation institute UNMZ started working on an update of some of the documents in the CEN 14383 series in Europe and worldwide (ISO). The CEN documents are readily available from every national standardisation institute and can be bought online. Unfortunately, lack of marketing and promotion, and the price (more than 400 euros for the whole series) is a significant barrier to usage. Probably even more important is that stakeholders responsible for the design, planning, and management of the urban environment prefer to adopt approaches specific to their city, region or national context.

Research has shown that the application of CPTED principles reduces crime, anti-social behaviour and fear of crime. The benefits of design and security approaches across Europe — and indeed worldwide — are increasingly recognised as the evidence-base grows. The Netherlands is a notable example where both through the Police Label Secure Housing accreditation scheme and the more recent

consideration of security within building regulations, burglary rates have declined significantly. Displacement of crime occurs much less frequently than is often supposed.

However, crime patterns vary over time, victim target groups change, offenders alter their behaviour and new *modus operandi* are invented (for instance, new crimes appear in the digital world). The danger is that new opportunities for crime emerge that, if not addressed, give rise to crime waves and feelings of insecurity. How to address this 'rise and fall' in crime is a key question.

Sustaining an effective ALO role is a key concern. In several countries (e.g. UK, Netherlands, and Germany) LEAs have played — and continue to play — an important role in CP-UDP. In the Netherlands, however, responsibility for the implementation of CP-UDP has shifted from LEAs to local authorities using national laws or local or national building codes and regulations as tools. Often a LEA still provides design, planning and urban management professionals with information and guidelines through training courses, workshops and even online information and education sources. But urban professionals are not necessarily being provided with information about crime risk specific to a proposed development. In the UK, cuts in public sector funding have resulted in a substantial decline in ALO numbers. LEAs therefore lack the capacity to provide feedback on planning proposals or meaningfully engage with architects and planners.

4.4 CP-UDP service in Greater Manchester – Design for Security

CCI LEA partner Greater Manchester Police (GMP) integrates crime prevention into the design and planning process in Greater Manchester in the northwest of England. The approach — the 'Manchester Model' — remains unique to Greater Manchester. In 1991, GMP appointed an architect as its first Architectural Liaison Officer. As the ALO service expanded, the practice of appointing ALOs originating from the development industry (architects, surveyors, planners, etc.) continued. This strategy was to become the foundation for the development of an ALO service unique in the UK. By the mid 2000s, four ALOs were reviewing over 2,000 applications at the planning committee phase, from across the ten local authorities in the Greater Manchester metropolitan area (Davey and Wootton, 2017).

In 2005, Manchester City Council, the biggest local authority in Greater Manchester— and so the source of most ALO work—implemented a local planning condition for Secured by Design. This stipulated that all plans had to meet the standard of the UK accreditation scheme — however, GMP lacked the resources to meet this requirement. With support from the Design Against Crime Solution Centre at the University of Salford, an innovative architectural liaison unit was established by: (i) the Assistant Chief Constable of GMP; (ii) the Head of Architectural Liaison Unit at GMP; and (iii) the Head of Planning at Manchester City Council. The aim was to formally integrate CPTED advice within the planning process, influence designers much earlier in the design process (i.e. before a planning application was submitted) and generate funding to employ staff to cope with additional demands on the service. This resulted in the innovation of the 'Crime Impact Statement' (CIS). The CIS fitted with

the 'Impact Statement' model common for considering issues in the building development industry, such as the 'Environmental Impact Statement' and 'Traffic Impact Statement'. The CIS was designed to enable crime prevention to be considered at a much earlier stage in a development project (Davey and Wootton, 2017).

How does the design process work? Where does the CIS fit in?

In simple terms, the design process for the development of a building can be conceptualised as comprising three stages: (i) briefing; (ii) conceptual design; and (iii) detailed design. These three stages may take anything from six months to several years to be completed, but generally the design process is completed prior to the final application for planning permission being submitted to the local planning authority (LPA). If the planning application is granted approval, construction can begin. Unfortunately, the majority of UK police ALOs do not get to review design proposals until a development reaches the planning application stage. In theory, ALOs should be invited by the local planning authority to comment on behalf of the police. However, this practice is far from universal. For example, while one local planning authority might specify that the police ALO reviews plans for projects it considers to be 'major developments', another may not involve an ALO at all.

Source: Davey and Wootton, 2017

A service design project was undertaken by the *Design Against Crime Solution Centre* that resulted in an improved means of engagement with the design development process. One finding from research undertaken on the project was that while the police used the word 'crime', planners, developers and architects tended to talk about 'security'. This insight ultimately led to the rebranding of the rather militaristic-sounding Architectural Liaison Unit as the 'Design for Security' consultancy, and the development of communication materials that eschewed police stereotypes to project a more professional, design-oriented image (see www.designforsecurity.org). The ALO role was redesigned as a 'Design for Security Consultant', thereby aligning with the terminology used in development projects (Davey and Wootton, 2017).

GMP Design for Security Consultants are able to engage with developments at the concept design stage more often through the mechanism of the Crime Impact Statement (CIS). Such early involvement lessens the risk of unexpected delays at planning approval stage due to objections by the police. Consequently, Design for Security have been able to develop the CIS into an income generating service, whereby developers commission the CIS. Developers pay for a timely and professional advice service, benefiting from fewer 'last-minute surprises' and costly planning delays, while GMP reinvests the income in expanding the service to meet increased workload. Experience delivering the CIS to date

has shown that once the requirement to consider crime and security is understood, most architects will rise to the challenge.

The need for developments to submit a CIS with their planning application is embedded within the local planning requirements. Initially only in the Manchester City Council area, but then widening out to all ten local authorities in Greater Manchester, the CIS was included in the 'Validation checklist' of documents needed to be submitted as part of an application for planning permission. The CIS document merely acts as the physical endpoint to a process of consultation that takes place with the designers through the development process. The Design for Security Consultant provides a critique of design proposals from a security, crime and fear of crime perspective, and acts as a 'critical friend' to the design team (Davey and Wootton, 2017).

Crime prevention services delivered by GMP benefit architects, planners, developers, the police and local communities. GMP wants to demonstrate the benefits of its Design for Security service in a practical way.

4.5   CP-UDP in Estonia

The Soviet militia has had to shift from law enforcement to become a police 'service' over the last three decades. Estonia became interested in CPTED around the year 2000 and participated in the CEN standardisation approach. The draft of the European pre-standard CEN/ENV 14383-2:2003 was translated into Estonian, but the approach never really took off because an important advocate of a multi-agency public private partnership approach from the private security industry suddenly died. A few years later these ideas were elaborated upon in the form of multi-disciplinary training funded by the EU (ISEC) in which not only the police and border guard participated, but also NGOs, local authorities, the national neighbourhood watch umbrella organisation and others.

The training resulted in a manual: *"CPTED manual: Crime prevention through urban design"*. The manual was meant to help a wider audience of users, including community police officers, local authorities and city design officials. The basis of an intervention strategy was formulated as follows:

> *"Rather than the police officers or local authority officials detecting some aspects that could possibly lead to a criminal act, cooperation is required, and possible threats need to be eliminated."*

After the first training and the resulting manual was published, more training sessions were delivered to the police officers and officials from local municipalities to improve their knowledge and cooperation in relation to urban design. Following the first training, Estonia also started to work on an accreditation scheme resembling the UK Secured by Design scheme and the Dutch Police Label. Thus far only a few houses have been officially accredited under this scheme.

The results of PJP requirements capture into CP-UDP will be explored at the DesignLab in September 2019.

4.6   Analysis – CP-UDP

The benefits of CP-UDP across Europe—and indeed worldwide—are increasingly recognised as the evidence-base grows. CP-UDP combines a number of different approaches and its implementation differs significantly across different countries.

4.6.1 Implementation: Local, national and European approaches

Many national agencies and practitioners continue to support the development of CEN standards and to benefit from sharing practice with colleagues in other EU countries. Participation in CEN standards may also support practitioners looking to introduce CP-UDP in their own region or country.

It is also evident that changes to regulation at an EU level can help prevent crime in relation to products, services and environments. A study into the impact of regulation observes that the automotive industry has reduced thefts of vehicles in part through compliance with European rules and regulations. Since EU regulation in 1998, the incorporation of immobilisers into vehicles has significantly reduced theft of cars.

> *"Regulation made application of the electronic engine immobiliser mandatory for all new cars sold within the European Union. The device reduced car theft by an estimated 40%, accounting for both the protective effect on cars with the device and the displacement effect on cars without the device."*
>
> van Ours and Vollaard, 2014.

The Netherlands has also benefited from changes in their national building code that improved the security of all new dwellings — i.e. not just ones considered at high risk. A robust empirical evaluation showed that:

> *"...regulation of built-in security in homes is highly effective in reducing victimisation from burglary. Through the application of better burglary-proof windows and doors, the burglary risk in new-built homes has been reduced by 26% compared with homes built in the years prior to the regulatory change."*
>
> van Ours and Vollaard, 2011, p. 503.

The introduction of the Building Code does not seem to have had a negative effect on burglary rates in Dutch homes built before the regulatory change. The evaluators also found no evidence for displacement of burglary to other property crimes (van Ours and Vollaard, 2011, p. 503)

The UK has also seen changes to the Building Code. Manufacturers' products, such as doors and windows, have to pass physical tests to gain PAS 24 or equivalent to meet the requirements of Part Q (Security – Dwellings) of the Building Regulations in England. The new requirement Q1, states that reasonable provision must be made to resist unauthorised access to any dwelling and any part of a building from giving access to an apartment (PBC Today, 2017). This new requirement applies to new dwellings—but not existing dwellings, even if undergoing renovation (PBC Today, 2016).

The advantage of integrating crime prevention into a national Building Code is that it ensures compliance with standards across a country, including in areas where there is a lack of resource and skills within police forces or local planning authorities to support CP-UDP.

4.6.2 Multi-agency partnerships

We can see that CP-UDP needs a multidisciplinary approach — or partnership approach — but also a clever synchronising of action at the neighbourhood level, the city level, the national and even European level. So there is a horizontal cooperation needed (multi-agency) but also a vertical one (neighbourhood, city, nation, continent).

In terms of measures to improve implementation of CP-UDP, attention should be focused on: (a) the points in the system where most benefit can be achieved, (b) the stakeholders most able to bring about change in a given context; and (c) the role of LEAs.

In the UK, Secured by Design (SBD) certainly plays a significant crime prevention role in the planning process, helping to design out crime across a wide range of building sectors. The scheme reports having achieved one million homes built to SBD standards with reductions in crime of up to 87 per cent (SBD website, accessed 3 May 2019). Its role in supporting testing and accreditation of security-related products is also important for product development, as well as supporting the security industry.

Secured by Design works closely with regulatory bodies, along with other organisations concerned with professional practice and quality:

> *"Secured by Design (SBD) works closely with UK Police Forces and a wide range of other organisations, including National and Local Government, British and European Standards authorities, the construction industry, trade associations and manufacturers, to achieve sustainable reductions in crime."*

> PBC Today, 2017.

However, the UK Secured by Design scheme has undergone significant changes in management and its ability to deliver the scheme must be diminished by cuts in police resources. Police forces across England and Wales reduced staffing, particularly amongst older employees, civilian staff and non-frontline officers (HMIC, 2011). Architectural Liaison Officer (ALO) resources have been diminished by cuts in public spending on policing. The impact on police crime prevention services is currently being

explored by the Design Against Crime Solution Centre. We do know that GMP's Design for Security service has been protected to some extent by its self-funding consultancy model.

In the Netherlands, Police Label has changed significantly, and research is being undertaken into the renewal of Police Labels awarded five years ago.

4.6.3 The Knowledgebase: Holistic framework and diversity

There have been a number of comprehensive reviews of the literature conducted over the last decade — all extremely valuable for understanding developments in CP-UDP (Ekblom, 2011; Gibson, 2013; and Armitage & Ekblom, 2019). Based on a meta-analysis of about 200 CPTED books and documents Victoria Gibson and Derek Johnson (Security Journal May 2013/16) stress the importance of one common language, or an 'holistic framework' as this is often called. According to academics like Paul Ekblom this is a heavy burden. In conclusion to an evaluation of the Manchester *Design for Security* approach Armitage and Ekblom note:

> *"Again, this chapter reminds us that CPTED and its implementation is far from standardised, with such differing models of delivery, even within one country (in this case England), that it renders generalisation of effectiveness hugely problematic."*

Armitage & Ekblom, 2019, p. 251.

Though some authors are still looking for the grail of one generic theory, we may agree that the current state of CP-UDP looks extremely diverse. However, this might also be seen as an indicator for the success of CP-UDP since each approach, scheme, initiative and project has had to adapt to the national context and take into account the local situation. Each country has specific types of crime problems, specific groups of offenders, particular types of victim, along with its own building codes, social approaches and laws. Each local situation — each neighbourhood — comprises different stakeholder groups, processes, situations and crime problems (remember the double crime triangle of figure 1). While there is general agreement on some principles related to CP-UDP, there may be ongoing debate regarding the safety and security of particular urban forms. For example, while the dangers of high-rise residential dwellings were explored by Jacobs and Newman, such building forms continue to be developed for deprived communities — especially in some countries (Soomeren *et al*, 2014)

These differing models of delivery of CP-UDP might be a sound theoretical basis for appreciating differences all over the world in delivering CP-UDP. Some aspects of the approach can nevertheless be standardised. For example, technical 'target hardening' measures such as locks, bolts, fences, lighting can be prescribed as fixed requirements. In short, the simple or more technical requirements. As we saw earlier, this is sometimes done in the Building Code of a country. As soon as more sophisticated social situational approaches are needed, relating to a neighbourhood or community, the CPTED

approach is an adaptive and organic one. When it comes to integrating crime prevention into design and planning procedures, the approach must be suited to the specific context.

4.6.4 Social, building and technological interventions

There has been debate about the extent to which CP-UDP approaches should promote technological interventions (such as CCTV) while ensuring enough attention is paid to supporting social aspects. In relation to CPTED, there has been some criticism of how it is defined, presented and implemented—particularly in the US. Greg Saville and Gerry Cleveland suggest that CPTED has traditionally adopted a physical design focus, and that it should include a stronger 'social component'.

Greg Saville and Gerry Cleveland discuss the rather 'physical design focussed' definition from Tim Crowe (a US ex-policeman), who defined CPTED in 1991 as:

> "…The proper design and effective use of the built environment can lead to a reduction in the fear of crime and the incidence of crime, and to an improvement in the quality of life."
>
> Crowe, 1991, p. 1; Crowe and Fennely, 2013, p. 280.

In 2008, Saville and Cleveland suggested adding a strong 'social component' and proposed calling it "*2nd generation CPTED*":

> "We are suggesting that 2nd generation CPTED is a new form of ecological, sustainable development. This ecological and sustainable development must, of course, use traditional CPTED design principles. But the problem with limiting CPTED to the rational offender model is that it is too narrow and offender centred. Ultimately, in the next millennium, it is not sustainable as a model. As a narrow preventive tool, we can make proper use of it, but we should never see it as a model for future development. For starters, we need to expand our efforts into the realm of residents' responsibility, residents' participation, youth activities, urban meeting places, and human scale neighbourhoods."

The authors suggest that in (1st generation) CPTED, the focus is on changing the physical environment, such as through better sight lines for visibility, better lighting, symbolic or real barriers and better maintained areas. In 2nd generation CPTED, there should be greater attention paid to the social environment. Examples of social interventions include making passive bystanders more active guardians; encouraging residents to become active; and increasing community interest and engagement. The proposal for 2nd Generation CPTED was not widely accepted by European audiences simply because these social aspects are already routinely considered and promoted in most EU contexts.

In addition, there are social theorists who suggest that such social/human versus physical/technical distinctions are artificial. According to Bruno Latour (1994), this dualism does not exist in real life:

"The mistake of the dualist paradigm was its definition of humanity. Even the shape of humans, our very body, is composed in large part of sociotechnical negotiations and artefacts. To conceive humanity and technology as polar is to wish away humanity: we are sociotechnical animals, and each human interaction is sociotechnical. We are never limited to social ties. We are never faced with objects. (…). At the very least, I hope to have convinced you that, if our challenge is to be met, it will not be met by considering artefacts as things. They deserve better. They deserve to be housed in our intellectual culture as full-fledged social actors. They mediate our actions? No, they are us."

(Latour, 1994, p.64).

Latour's best-known example is that of the gunman, in which Latour states that a man (social/human) and a gun (physical/technical) form a new third entity when they are connected: the gunman. Closer to CP-UDP we may introduce the 'lock-resident': the physical/technical lock in itself does not prevent a burglary, we need a motivated resident willing and able to turn the key of a lock in a burglary resistant door. Following this line of thinking, we would suggest that our human-designed and human-used physical/technical environments are necessarily loaded with social and cultural meaning. Thus, our cities, towns and neighbourhoods are social actors — "they are us".

5 Measuring and mitigating feelings of insecurity

5.1 Victimisation surveys

LEAs are interested not only whether local citizens *are* safe—but also whether they *feel* safe. Police data on recorded crime does not provide an accurate measure of citizen safety because incidents are often not reported to the police. Victimisation surveys are a method for tapping into information about the types of crime experienced by citizens—regardless of whether reported to the police. The fact that a standard methodology has been developed to survey participants means that results are comparable across different countries and regions, as well as over time. The results are extremely valuable to policymakers and potentially also useful for LEAs.

Victimisation surveys often include questions about citizens' attitudes towards the police and feelings of insecurity. Indeed, the victimisation survey is the most common mechanism for enabling questions of 'feeling of insecurity' to be posed to citizens across Europe.

The first self-report survey for collecting information on people's experiences of crime was the National Crime Victimisation Survey (NCVS) carried out in the United States from 1973 on an annual basis. Developments in the US inspired European attempts to measure victimisation and feelings of insecurity.

Across Europe, the International Crime Victim Survey (ICVS) is an important tool: a fully standardised survey enabling cross-national comparisons of crime victimisation. The ICVS has developed into one of the largest projects in international criminology, covering 80 different countries. The European Commission (EC) co-sponsored the work of the ICVS in the 15 older EU member states in 2005 and the EC sponsored a round of national surveys in 2009 using a reduced version of the 2005 ICVS. These pilots were conducted in 2010 and were used to test new methods of data collection — including internet-based interviewing.

Problems attracting regular funding to administer and analyse the ICVS mean that only twelve countries participated in the most recent survey (2009). This seems unfortunate and indeed surprising considering its value for policymakers of being able to measure victimisation trends over time and draw comparisons between national contexts. The ICVS results helped explain differences in crime levels due to factors such as alcohol consumption (which fosters violence and anti-social behaviour) and bike ownership (which creates opportunities for theft). Analyses of ICVS data have helped explain the drop in crime that occurred since the mid-1990s.

5.2   Measuring feelings of insecurity

The ICVS also includes questions about satisfaction with police services, citizens' feelings of insecurity and security measures taken by households and individuals. Feelings of insecurity are measured with a set of standard questions: *How safe do you feel…?* in different contexts (e.g. your neighbourhood) and situations (e.g. after dark). The results are analysed to identify factors that contribute to respondents reporting feeling insecure, including previous experience of victimisation, gender, age, socio-economic factors related to place of residence, etc.

Guidance on conducting victimisation surveys

Many countries and regions conduct victimisation surveys. Guidance on developing a victimisation survey is available from: https://www.unodc.org/documents/data-and-analysis/Crime-statistics/Manual_on_Victimization_surveys_2009_web.pdf

The results of victimisation surveys are often used to compare reported feelings of insecurity with actual levels of victimisation. The resulting reports suggest that so-called *'fear of crime'* is widespread and far outweighs the actual risk of crime victimisation. This seemingly irrational fear of crime has come to be regarded as a problem in its own right, and the focus of some European countries has been on tackling this perceived *'reassurance gap'* (Jackson, 2004). However, the significance and indeed the existence of this 'gap' has been called into question.

Some experts argue that fear of crime cannot be measured through standardised, fixed-choice questions. In seeking to objectively quantify fear of crime, victimisation surveys suggest that such feelings are absolute and unchanging. However, research shows that people's attitudes and beliefs are not stable and may vary considerably within a short space of time. It is questionable whether results gained from a hypothetical situation—i.e. in a survey—provide real insight into citizens' everyday real life or experiences. More fundamentally, we know that there is considerable discordance between what people *say* and what they *actually do* in reality.

Actions speak louder than words

There may be a big difference between what people say and what they do. People might tell you they are excited about your new product, but when they are in a buying situation their behaviour may be totally different.

Source: Alexander Osterwalder, born 1974, is a Swiss business theorist

Efforts have been made to redesign survey questions to more accurately identify whether feelings of insecurity actually impact on quality of life. This involves asking respondents to identify real instances of feeling afraid or threatened.

Feelings and functions in the fear of crime

Applying a New Approach to Victimisation Insecurity

Emily Gray, Jonathan Jackson and Stephen Farrall, The British Journal of Criminology. Vol. 51, No. 1 (January 2011), pp. 75–94. Available from: https://www.jstor.org/stable/23640338?seq=1#page_scan_tab_contents

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5.3 Opinion surveys

Some experts argue that feelings of insecurity may be coloured by being asked about the experience of victimisation. The Eurobarometer is an opinion survey used to gain information about public opinions on issues relevant to EU policy makers, including in relation to security issues.

Citizens have been surveyed in some Eurobarometer editions for their views on what should be the priorities for the EU. In April 2017, respondents were asked to select from a list up to three main challenges they felt were facing the EU. Approximately one third (32%) of respondents chose *"terrorism and security"*.

The Eurobarometer has also been used to survey feelings of insecurity. The results were used to show that while rates of crime had declined between 1996 and 2002, feelings of insecurity had not declined significantly. Feelings of insecurity were highest in Greece, despite low levels of crime, and lowest in Denmark, even though Denmark has comparatively high levels of crime. Further analysis suggested that environmental factors (such as the dealing of drugs openly in public places) generated feelings of insecurity.

5.4 Measuring insecurity in Catalonia, Spain

CCI LEA partner the Departament d'Interior – Generalitat de Catalunya (INT) prioritises addressing citizens' feelings of security. In Catalonia, the police—Mossos d'Esquadra—comprise around 17,000 staff, including 183 police officers working as Community Police Offices (ORC) and 10 police officers working for the Mediation Unit of the Mossos d'Esquadra. The police organisation stated publicly that community policing should permeate the whole organisation—rather than be exclusive to those formally tasked with delivering it on the ground. The current focus is on quality of life — people's wellbeing and feelings of security. The citizen is placed at the center of police interventions, and the satisfaction (or dissatisfaction) of citizens informs the LEA's targets.

Catalonia has been measuring feelings of insecurity for some time. In 1984, the Barcelona Council decided to use a survey to assess the impact of victimisation and insecurity on life in the city. The survey covered both 'objective' and 'subjective' aspects of the problem. It was anticipated that the new tool would give local authorities responsible for urban security information about citizens' issues and priorities. The collection of victimisation data was a sensitive issue in Catalonia. The National Police statistics were considered poor in terms of measuring crime and the police were reluctant to share crime data with local authorities. However, the survey was a success in Barcelona and was later widened to cover the whole of Catalonia.

The approach adopted in Catalonia includes a "spontaneous memory of victimisation" question for measuring feelings of insecurity—or subjective security as it is known in Catalonia. Respondents are first asked: *"Do you remember having been a victim of criminal offences such as theft, robbery, aggression... in the past twelve months?"* The number of people who answer "yes" to this 'spontaneous memory of victimisation' question is compared with those who subsequently recall being victimised when asked specifically about a crime in relation to their home, vehicle, etc. The level of security is measured using the question: *"How safe do you feel in your municipality – on a scale from 0 to 10"*. The findings show that when the spontaneous memory of victimisation rises, the level of declared security diminishes. It is assumed that a crime that impacts on the victim is more easily recalled.

In Catalonia, subjective aspects of security are becoming increasingly relevant to public policies at a local level. Understanding subjective elements of safety is considered important for policymakers and practitioners looking to improve citizens' quality of life. Citizens who feel unsafe reduce their activities, modify their behaviour and become more isolated—a downward spiral that can act to reinforce their feeling of insecurity. Avoidance behaviours impact negatively on social and economic life.

INT is seeking to understand feelings of security at a neighbourhood or situational level — what they term the "micro-level". The aim being to provide useful information for policymakers and practitioners responsible for preventing and mitigating feelings of insecurity.

In Catalonia there are surveys that focus on particular groups, comparing the findings to the national survey as a baseline. The results from the survey on Violence Against Women were highlighted as particularly valuable in taking practical action.

A key issue for INT is the effective integration of findings from surveys into local policies and practices. INT will explore this issue in the CCI project.

5.5   Measuring insecurity in Lower Saxony

CCI LEA partner the Landeskriminalamt (LKA) in the federal state of Lower Saxony is a pioneer in measuring feelings of insecurity in Germany. Previously, policing strategy in Germany has largely been guided by crimes reported to the police, documented in the German Police Crime Statistics (PKS).

However, it is not possible to determine from official data on police recorded crime alone whether crime rates are falling or rising, as this does not include unreported crimes and reporting behaviour may change over time. In order to better understand crime trends and determine the impact of policing measures, more comprehensive information concerning crime victimisation is essential.

There were efforts to develop a nationwide study involving all German federal states within the research project *"Barometer Security in Germany"* funded by the Federal Ministry of Education and Research (BMBF). However, to date this has not yet been implemented. Lower Saxony wanted to have a say in the conceptualisation of insecurity and to have access to data in the shorter term. It was therefore decided that Lower Saxony should conduct a representative population survey of its own.

In the LKA survey, a representative sample (n=40,0000) of residents of Lower Saxony (aged 16 and over) are asked questions about four aspects: (i) socio-demographic data; (ii) feelings of insecurity; (iii) experiences of being a victim of crime; and (iv) perceptions of the police and their work. To ensure the survey content reflects current priorities, the survey includes a flexible fifth aspect, "current phenomenon".

The survey seeks to capture three aspects related to individual feelings of insecurity. The affective component is concerned with feelings and describes the emotional fear of being affected by crime. On the cognitive level, where information is processed, those fears are replaced by a rational assessment of the crime risk: what is the likelihood of becoming a victim of crime? The conative component refers to the behavioural level: What measures do people take to protect themselves against crime? What coping strategies do they use? Conative refers to *"a wish, intention, or effort to do something"* and psychologists typically differentiate between cognitive and conative aspects of behaviour.

Theory-based approach in Lower Saxony

In Germany, criminologist Klaus Boers has most influenced the German fear of crime research. Boers has provided a theoretical basis for measuring fear of crime on three different dimensions (Boers, 1991)

Source: Boers, Klaus & Kurz, Peter (1997): Kriminalitätseinstellungen, soziale Milieus und sozialer Umbruch, in: Boers, Klaus/ Gutsche, Günter und Klaus Sessar (Hrsg.). Sozialer Umbruch und Kriminalität in Deutschland, Opladen, S. 187-253

Three rounds of the Survey on Safety and Crime have been conducted in 2013, 2015 and 2017 respectively.

The theory and practice related to measuring and mitigating feelings of insecurity was explored in the CCI DesignLab being held in January 2020.

5.6   Analysis – Measuring & mitigating citizens feelings of insecurity

5.6.1   Refining fear of crime questionnaires

Serious concerns have been raised about attempts to measure so-called "fear of crime" made by national victimisation surveys, such as the Crime Survey of England and Wales (CSEW). Farrell, Gray, and Jackson (2007) and Farrell, Jackson, and Gray (2006) suggest that standard methods employed in measuring feelings of insecurity may in actuality be constructing fear of crime as a significant social problem for a large proportion of the population. They suggest fear of crime may be an artefact of poor survey techniques, rather than a real quality-of-life issue accurately revealed by such research.

The authors highlight concerns with some of the "industry-standard" questions that these surveys employ (Farrell et al, 2007, p.19). One typical question asks about feelings of safety when walking:

> *"How safe do you feel walking alone in the area where you live?*
>
> *(very safe; fairly safe; a bit unsafe; or very unsafe)"*

Another enquires of respondents' worry about victimisation, which is worded as follows:

> *"Most of us worry at some time or other about being a victim of crime. Using one of the phrases on this card, could you tell me how worried you are about the following?"*

The following crimes were then asked of in turn: "Having your home broken into and something stolen?"; "Being mugged and robbed?"; "Having your car stolen?"; "Having things from your car stolen?"; "Being raped?"; "Being physically attacked by strangers?"; "Being insulted or pestered by anybody, while in the street or any other public place?"; and finally, "Being subject to a physical attack because of your skin colour, ethnic origin or religion?" The answer options offered to respondents were "very worried; fairly worried; not very worried; or not at all worried" (Farrell et al, 2007). As the first statement shows, before the survey question is even asked, respondents are invited to admit to being worried. Furthermore, the survey positions the state of worry as a social norm. Such survey questions could at the very least be considered leading, and thus the value of responses gathered dubious.

Interesting research by Farrell *et al* (2007) into methods of measuring so-called fear of crime suggests that the commonly used question "Are you worried about crime?" does not really measure "fear of crime," as we might commonly understand the term. Rather, the question taps into a range of different feelings and views about crime held by the respondent. Qualitative interviews show that a respondent may answer in the affirmative to the question about "worry" for a variety of reasons. These include because the respondent:

- Has personally experienced fears or anxieties generated by actual experiences of crime
- Feels angry about having been a victim or the prospect of becoming a victim

- Considers the prospect of being a victim frightening

- Believes that crime is an important social issue that should be addressed; or

- Currently takes steps to improve his or her own personal security

Farrell *et al* (2006) propose that "fear of crime," as a lived experience refers to a range of emotional reactions and cognitive processes. Impacting on quality of life are likely to be real moments of fear of victimisation, arising prior to or post-victimisation or due to threat of victimisation. The puncturing of mundane thoughts about security by sudden shock events that alert one to the possibility of crime victimisation may impact negatively on quality of life. For example, hearing about family or friends that have been victimised or finding out that a location one frequents is a crime hotspot may generate genuine worry. The aforementioned examples are qualitatively different from nagging doubts about the security of one's home and property when left unattended or the awareness of crime as a possibility and the need for added precautions. Different again is the abstract set of feelings and attitudes about crime as a social problem or issue for society. The authors suggest that the impact on quality of life depends on the intensity and type of feeling and on its frequency.

5.6.2 The CCI approach

In light of the lack of a humanist-realist, conceptual formulation of 'feelings of insecurity' that can be easily applied to practical situations, USAL developed the CCI Feelings of Unsafety Model (see **figure 5.1**). This model aims to better operationalise the many different aspects of worry, anxiety, fear, and feelings of insecurity that relate to crime and human perceptions of risk.

Humanist-realism

This is a movement in sociology that recognises the concept of human nature as being essential for sociology. A main proponent of the need for this approach is academic Terry Leahy, who criticises modern sociology:

"If there is a crisis in the social sciences, it is squarely tied to this. As a critical discipline we cannot agree about where our criticism leads. What is worse, we do not even like to talk about this at our conferences, where it is much more pleasant to engage in critique and get on together as fellow members of the broad Left — without attacking each other's models of Utopia."
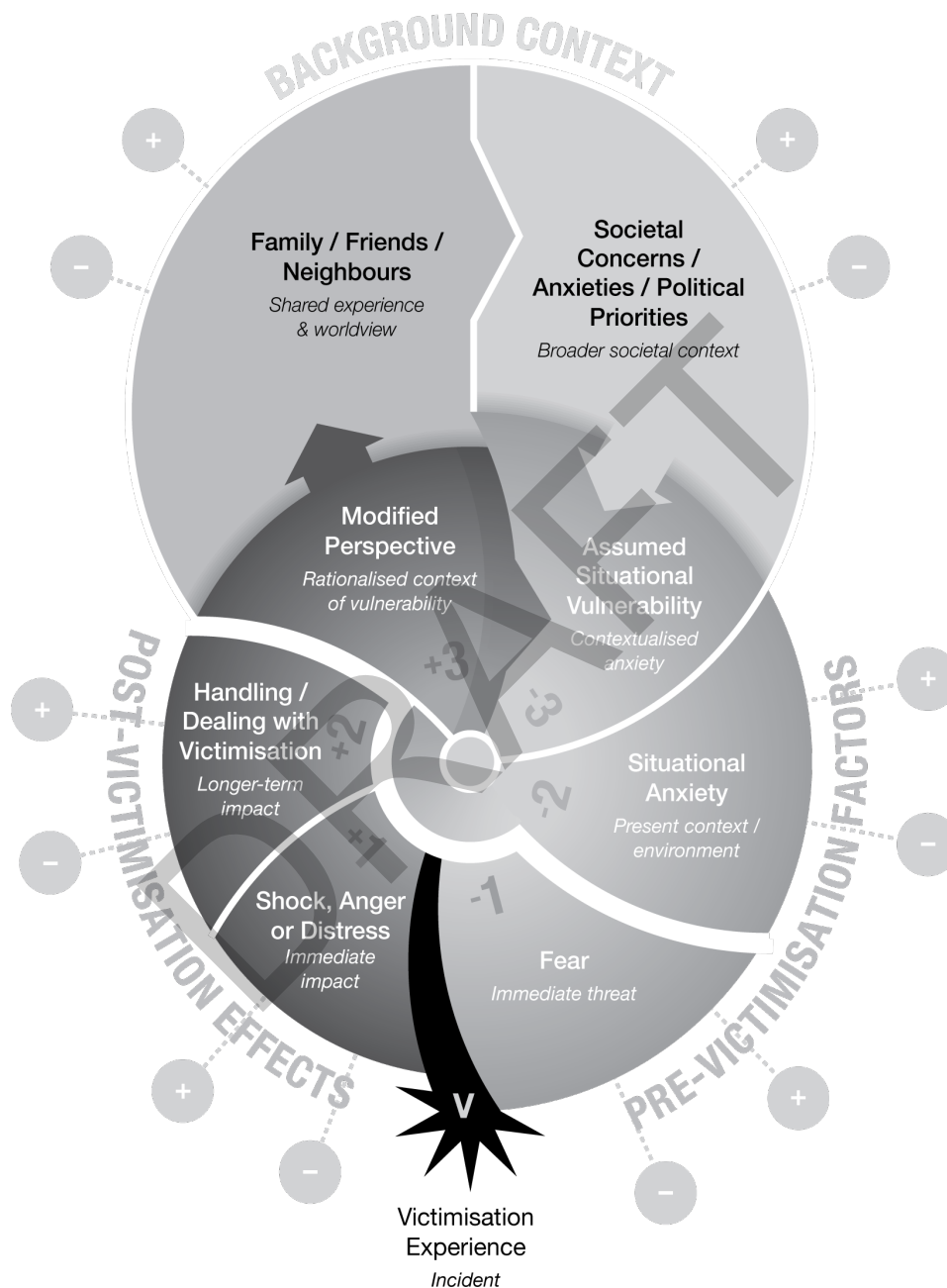
Source: Leahy (2016) p. x

Figure 5.1. The CCI Feelings of Unsafety model

The CCI Feelings of Unsafety Model reserves the term 'fear of crime' for the situation immediately before victimisation, when an individual is aware of an immediate threat of victimisation. The model seeks to position feelings of insecurity in relation to actual victimisation, and other perceptions of anxiety or risk that may be experienced before this point. It is not assumed that all individuals will

experience crime—or even an immediate threat of victimisation. Indeed, feelings of insecurity often arise without any actual victimisation or threat — based purely on an individual's perceptions of a situation. Clearly such individual perceptions will vary with demographics factors (young-old; male-female) but may also be affected by the experiences of familial and social groups — and shared stories about these.

Adapted from a model developed by Davey & Wootton (2014), the human-centred CCI Feelings of Unsafety Model conceptualises the experience of insecurity from the perspective of the individual's experience: thoughts about a situation in anticipation; experience in a particular situation; experience during and after a threat or victimisation; and longer-term impact. The Model identifies (a) factors that may foster and/or mitigate feelings of insecurity; and (b) factors affecting the perceptions of different groups, including young people / older people, women, men and ethnic minorities — see D7.2 Report on Feelings of insecurity – Concepts and models.

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7 Appendices

7.4 LEA characteristics

Clive Emsley summarises the common characteristics acquired by European police institutions during the nineteenth century in three ideal-types:

- Civilian police forces controlled by the central government and normally deployed in cities

- Municipal civilian police controlled by the municipalities

- National, military police forces also controlled by the central government and normally deployed in rural areas

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