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DELIVERABLE 7.1

## PIM Toolkit 4: Ethical, legal and social issues





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### DELIVERABLE 7.1

## Ethical, legal & social issues impacting measurement of citizens' feelings of insecurity

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# 1 Executive Summary

Measuring and mitigating feelings of insecurity is linked to wider discussions around proactive action and state-society relationship. It is closely linked to confidence and trust in the state, in its institutions and in communities. All of these objectives promote social cohesion which is essential for the success of the work of law enforcement agencies (LEAs).

While police forces take a reactive (ex-post) approach when reacting to a rise or fall in crime statistics, measuring and mitigating feelings of insecurity constitutes a proactive (ex-ante) approach that already shapes the environment before crime is committed. In states with liberal societies based on the autonomy of the individual this can create significant tensions.

Ethical concerns relate to the veracity and versatility of surveys, the choice of data sources and methods of interpretation, as well as the risks associated with mitigation of crime based on public perceptions.

Whereas the Cutting Crime Impact (CCI) state-of-the-art review focuses very much on the design and deployment of large-scale surveys, one might consider such an approach as too strongly rooted in traditional paradigms of data collection, storage and interpretation. A review of the landscape of digital tools available to record feelings of insecurity reveals a large amount and variety of applications already available for digital devices in many regions of the world.

Legal issues relate to privacy and data protection during the data collection, processing, storage and analysis process. Furthermore, individual and group autonomy need to be guaranteed in compliance with regulation and human rights principles.

Social issues relate to the topic of handling equality and acknowledging differences of individuals and communities, as well as finding legitimate strategies allowing to transfer empirical insights into normative action.

We recommend: (i) continuously improving methodologies to measure feelings of insecurity; and (ii) simultaneously exploring sophisticated ways of communicating the results. This will to actively shape the shift towards digitalisation, and at the same time maintain a trustworthy relationship with citizens on the basis of respect for human rights, individual and group autonomy.

In conclusion, it can be stated that one of the main challenges of developing this area is to remain a human focus (with the intention to design methods creating a better life for the individual and the community), while making progress in standardisation and empirical processing of the data relating to feelings of insecurity.

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## 2 Introduction

Measuring and mitigating citizens' feelings of insecurity is a complex endeavour. While academics and policy makers have tried to compare trends in criminal behaviour since the 1830s (Killias 2010, p. 11), a feeling of (in-)security is difficult to define objectively. Starting from the mid-1960s in the United States such methods have been developed and deployed across the world, including Europe (Valente et al. 2019). It seems important to address insecurity in order to improve the quality of living of inhabitants of a community and prevent crime from occurring in the first place. Additionally, this subject deserves particular attention in times of declining numbers in crime statistics on the one hand, while—according to surveys—feelings of insecurity among the general population remain relatively high on the other hand (Davey et al. 2019a, p. 13). Hence, which method should one use to empirically measure individual feelings relating to such a vague term? Ideally it would be possible to manage and mitigate negative sensations based on such fact-based insight.

The Cutting Crime Impact (CCI) state-of-the-art review (Davey et al. 2019a) provides an overview of current approaches in this domain, focusing on two European regions with considerable experience: Catalonia, Spain and Lower-Saxony, Germany. Both have their own distinct societal, economic and political make-up as well as their own distinct security and safety problems. At the same time, they profit from data available at the European level in the form of European surveys ('Eurobarometer') including questions relating to the subject (Davey et al. 2019a, p. 13-14). This dichotomy highlights the need to take into account regional differences on the one hand, while being able to compare data across regions and countries on the other to identify broader trends.

This submission highlights a range of different scenarios and contexts. How could feelings of insecurity be measured in light of the ambiguous concept of (in)security? Furthermore, potential conflicts and trade-offs emerge when attempting to mitigate such feelings. Satisfying one group may result in the exclusion of another. For example, excluding homeless or young people from the public realm might be beneficial for the feeling of security of other groups, but is it necessary, or fair (Davey and Wootton 2014)? Who should make such decisions in relation to the public domain is an important consideration for LEAs.

Another issue relates to the establishment of trust among different members of a community, which becomes an even bigger challenge as our environment is dominated by digital technology predominantly used to control individuals (Keymolen and Voorwinden 2019, p. 17-18). As city infrastructure becomes 'smart', digital interaction increasingly becomes the default, resulting in a much wider array of (partially) personal data available at all times. In such a highly connected environment, the line between neutral observation and constant interaction becomes blurry, and public institutions as well as policy makers might be intrigued to nudge individuals and populations towards the 'useful' form of behaviour (Sætra 2019, p. 9). However, citizens—the 'users' of this smart city platforms—might themselves start to collect, share and analyse information about the state of

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safety in a community (Gstrein and Ritsema van Eck, 2018), undermining the authority of state-run institutions and their interpretation of events through this process of disintermediation. Such activities might intend to create transparency. However, they might also ultimately threaten the state-monopoly on legitimate use of force, if those insights are taken into immediate action by their collectors. The movement towards open data and open crime statistics might even fuel this development, since it allows to combine openly available data sources with closed/confidential ones to draw new insights.

After exploring these issues on the basis of the research of the CCI project and taking into account relevant literature, we finally submit that it is important for law enforcement agencies (LEAs) to continuously improve their methodologies and communication of results in order to keep control of developments, allowing them to actively shape the shift towards digitalisation and an environment with omnipresent sensors, and at the same time maintain a trustworthy relationship with citizens on the basis of respect for human rights, individual and group autonomy. This might ultimately pave the way for a more dignified co-existence that should be in the interest of all parties.

## 2.1 Scope

We base our observations on a literature review plus the state-of-the-art report produced by the CCI consortium. Consequently, this deliverable consists of a conceptual (section 3) and empirical investigation (section 5). We combine those with suggestions for creating a holistic approach consisting of the three lenses focusing on ethical, legal and social concerns (section 4). This setup will enable us to develop our findings from scratch and apply them in an empirical setting based on the observations of the consortium. Finally, conclusions and recommendations seek to improve the development of a toolkit for measuring and mitigating feelings of insecurity—one of the intended outputs from CCI.

## 2.2 Approach

This report deals with the social, ethical and legal implications of measuring and mitigating feelings of insecurity and is scheduled for completion in the early stages of the toolkit design process. Hence, the approach of this paper is in between a conceptual and empirical investigation. We begin with exploring questions such as: What is at stake for our police forces, citizens and communities when LEAs start measuring and mitigating feelings of insecurity? This is based on a literature review. Following on, an in-depth analysis of the state-of-the-art report (Davey et al. 2019) underpins the empirical investigation.

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## 2.3 Purpose

This report serves as starting point to inform the participants of the CCI DesignLab about salient social, ethical and legal considerations. The design process will include LEA officers and staff, experts as well as academics. By including a conceptual and empirical review in the early stages of the design process, the project consortium seeks to ‘frontload’ ethics in the design of new technologies, systems and toolkits (Van den Hoven 2007). The reason for setting up the process in this way is grounded in literature on human-centred ‘design-thinking’ and value-sensitive design. Human-centred design thinking as an approach is based on, amongst others, consideration and involvement of the user in the design process (Giacomin 2014). Direct stakeholders (e.g. law enforcement) are involved in the design process, whereas the interests of indirect stakeholders (e.g. citizens and communities) are considered in this report. Value-sensitive design is complementary as it is based on the mutually constitutive relationship between humans and/or human values with technologies, which are increasingly part of policing approaches.

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## 3 Conceptual investigation into Ethics & Human Rights – based on literature review

### 3.1 Why do ethics and human rights matter?

Measuring and mitigating feelings of insecurity is closely linked to confidence and trust in the state, in its institutions and in communities. All of these objectives promote social cohesion which is essential for the success of the work of LEAs (Sučić and Karlović 2017, p. 11,12). They require long-term visions, decisions based on values, strategic policies, and sufficient resources to put them into action. In the legal order of the EU, these fundamental values are enshrined in the three constitutional pillars of human rights, democracy and the rule of law. Starting to elaborate on those at the very beginning of the primary sources of EU law, the preamble of the treaty on the European Union (TEU) expresses that states adhere ‘to the principles of liberty, democracy and respect for human rights and fundamental freedoms and of the rule of law.’ Article 2 TEU sentence 1 clarifies that the ‘Union is founded on the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities.’ This should be considered together with Article 10 TEU paragraph 1, which clarifies that the ‘functioning of the Union shall be founded on representative democracy.’ Hence, these provisions express that LEAs in the EU are bound by the rule of law, promote human dignity as expressed in detail through individual fundamental rights and freedoms, and are controlled through representative democracy. All of these principles seem to go very well together with the original ideas of Sir Robert Peele, who arguably aimed at putting the community at the basis of law enforcement with the approach developed for community policing in the UK at the beginning of the 19th Century (Davey et al. 2019b, p. 9-11).

Nevertheless, the work of LEAs in the context of measuring and mitigating feelings of insecurity, and the concrete dimension of a proactive approach, raises the question of the appropriate relationship between the individual, the community and the state. While police forces take a reactive (ex-post) approach when reacting to a rise or fall in crime statistics, measuring and mitigating feelings of insecurity constitutes a proactive (ex-ante) approach that already shapes the environment before crime is committed—although insecurity may be fostered by previous victimisation. In states with liberal societies based on the autonomy of the individual this can create significant tensions. The need

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for acknowledgment of this tension affecting the establishment of trust becomes more visible with the increased production, collection and analysis of 'big data' (Taylor et al. 2017, p. 235-236; Sætra 2019, p. 9), and the emergence of smart city infrastructure (Keymolen and Voorwinden 2019, p. 2-11; Edwards 2016), potentially leading to the creation of what has been described as 'granular society' (Kucklick 2016). While it is obvious that police need to be present in communities and monitor behaviour constantly, it is difficult to decide how much physical and virtual presence is enough, and whether too much monitoring and state-led action is resulting in the creation of a 'police state'. So far, the trend towards such an illiberal society is facilitated by the use of modern technology (Osborne and Cutler, 2019). With seemingly omnipresent real-time monitoring, instantly and automatically analysed by algorithms and smart agents (Cuthbertson 2019) and coinciding with the establishment of what has been described as 'culture of surveillance' (Lyon 2018, p. 127-167), the realisation of dystopian scenarios has become a looming and uncomfortable perspective.

This blends in with the (mis-)understanding of Jeremy Bentham's idea of a panopticon, a space designed to surveil prisoners and other individuals constantly and effectively through guard(ian)s, establishing safety and promoting social good, but at the cost of individual autonomy. Originally envisaged for a society where law enforcement was the exception rather than the norm, ideas and re-interpretations of the panopticon have taken into account the considerable changes in the societal and technological fabric of societies throughout the 20th and 21st Century (Galič et al. 2017, p. 32-34). In other words, any change or increase in the monitoring of contemporary societies has to be considered against this new reality of permanently rendered individuals and the existence of granular digital pictures of communities (Kucklick 2016). Are we already living in the 'carceral city' that the French philosopher Foucault (1995, p. 305) has imagined when working on Bentham's ideas? Not only the autonomy of the individual can be undermined through modern surveillance assemblages, entire groups are being limited in their opportunity to develop and thrive (Taylor et al. 2017, p. 235-236).

In theory, it seems easy to reconcile what has been stated in the three paragraphs above by concluding that LEAs operating on the basis of democratic decisions, the rule of law, and human rights express those values through proactive action and collaboration with communities. However, the more we move away from abstract observation to the level of concrete individual application and persistent interaction based on constant interconnectedness, the more it will be difficult to find those common values in individuals that may not wish to specifically engage in society. What about those who want to live their lives being left alone by LEAs? What about those proclaiming '*my home is my castle*'? In other words, my home is where a person can do as they please and exclude who they please. It is difficult to bridge this obligation to care and prevent on the one hand, with the necessity to provide individual and group autonomy on the other. How this is connected to wider discussions around proactive action and the state-society relationship is addressed in the next section.

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## 3.2 Discussions around proactive action and the state-society relationship

Measuring and mitigating feelings of insecurity is closely linked to wider trends in the European Union on law enforcement and public sector bodies taking proactive action. In policing this trend has been set in motion several decades ago, such as was the case in the United Kingdom (UK) in the 1990s following a critical government review (Audit Commission 1993; Bunnik n.d.). Furthermore, taking proactive action has recently been boosted by developments in the digital domain, as was already elucidated in this submission as well as in the review of predictive policing, allowing police forces to estimate where certain types of crime are likely to occur (Gstrein, Bunnik & Zwitter 2019). By measuring feelings of insecurity, LEAs are not just waiting for citizens to report crime, but actively seeking to measure hidden crime figures that are not reflected in other crime statistics.

Furthermore, measuring feelings of insecurity is also part of wider discussions around state-society relations in late modernity. Perceived insecurity cannot be approached in a vacuum but is part of general societal and political developments. In Catalonia, for instance, there is a clear link to the Spanish transition to democracy. Interestingly, there seems to be little interest in victimisation surveys in the rest of Spain where crime statistics still play a bigger role to plan how LEAs should work in the future and which kind of strategies could be useful (Davey et al., 2019a, p. 15-18). In Germany crime statistics are produced by the police forces in the 16 federal states ('Länder'), as well as the federal police depending on which competences are vested in the respective LEA. The crime statistics are compiled from individual data sets according to uniform standards. However, the approach to measuring feelings of insecurity is not standardised across Germany, and some LEAs are more proactive in developing such methodologies than others (Davey et al., 2019a, p. 25). While in Lower Saxony as well as Catalonia the different methodologies seem to be plausible and developed according to advanced scientific insights, it must also be emphasized that these activities are still at an early stage and it remains to be seen which approaches work, and why. The key question is how the findings inform action.

## 3.3 Relevant concepts and theories

This domain touches directly on the core concepts of law enforcement and police, notably (in)security, safety and 'fear of crime', as well as questions on how this can be measured effectively and accurately. Security is a broad concept that is employed in various fields, such as social sciences, international relations, political science, criminology, architecture, urban planning, economics, and computer science. Even within those fields, there are many different schools of thought on what constitutes (in)security and how this can be studied. For the purpose of this report it is linked to public perceptions of insecurity and 'fear of crime' by individuals (Barker & Crawford, 2011). Section 5.1

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provides an example of how the concept feelings of insecurity is understood in the Lower Saxony case, distinguishing between emotional, rational and behavioural impact that fear of crime can have on an individual. Further differentiation can be made on feelings of insecurity vis-a-vis society in general and the personal domain (Davey et al. 2019a, p. 26).

Additionally, this domain is influenced by theorisation on the relationship between crime and wellbeing. Especially in the EU, crime surveys increasingly broaden their scope to include questions on the wellbeing of citizens. As such, these models move beyond merely measuring hidden levels of crime. Wootton and Davey (2014) explain that crime has a ripple effect which can have significant impact on the personal, family, community and even societal level. In addition, crime and feelings of insecurity have a strong correlation with the (urban) environment. This correlation can be traced back to the Chicago School of Sociology (see, for instance, Shaw 1929) and has since evolved into design and planning strategies to nudge individuals and groups to not engage in criminal behaviour (Van Soomeren, Davey & Wootton, 2019). Finally, there is an increasing number of applications for digital devices allowing users to record and share feelings of insecurity, propose certain routes to navigate a city which are 'safe', as well as rate specific parts of a city or community space (Gstrein and Ritsema van Eck, 2018). However, it is unclear how LEAs interact with this kind of information sources and whether they should do so at all.

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## 4 Holistic approach: ethical, legal and social concerns

### 4.1 Ethical

This section addresses several ethical concerns related to measuring and mitigating feelings of insecurity, notably versatility, veracity, data sources and their interpretation, as well as how insights feed into strategies to mitigate crime as a result. This list is not conclusive yet allows for providing an overview of salient aspects that should be addressed when designing toolkits on measuring and mitigating feelings of insecurity.

- Versatility of crime surveys

Van Dijk (2015) highlighted that the European approaches are less legalistic and, therefore, nimbler than the U.S. models. Consequently, European surveys should be able to take contemporary issues faster into account. An example of this versatility is the more recent focus on cybercrime, which has been included in the Lower Saxony model (Davey et al. 2019a, p. 27). However, this versatility is also demonstrated by various other European surveys that focus on more than just measuring the 'true volume of crime'. In contrast, they also aim at integrating other factors allowing to draw inferences on the general quality of life (Van Dijk 2015). Nevertheless, right at the beginning of the establishment of such flexible models it might be difficult to tie them to the principle of the rule of law. Critics might argue that it is challenging to see their concrete relevance for the actions of LEAs, potentially making it difficult to create trust and acceptance within the general society. Additionally, one could ask how dependable and reliable such flexibility is in the long term. It could become more difficult to compare datasets over time and hence impossible to identify significant developments and trends clearly. Some LEAs tackle this issue by asking a range of standard questions regularly, combined with a number of questions that can be varied to address current issues.

- Veracity of crime surveys

A second concern is the veracity of measuring feelings of (in)security. This can be undermined by issues related to measurement and conceptualisation (Barker & Crawford, 2011). Insecurity is an ambiguous, deeply personal, concept and difficult to capture in surveys, in which there is little room to explore context and subjectivity. Ideally, other measures would be employed, such as semi-structured

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interviews or inspections of particular locations to capture this complexity in more detail. A qualitative approach is being adopted by some LEAs, although it is perhaps considered too costly to execute and difficult to deploy in some practical settings. Methodological issues, therefore, remain a persistent problem—which places even more emphasis on conceptualisation.

- Data sources and interpretation

Whereas the CCI state-of-the-art review focuses very much on the design and deployment of large-scale surveys, one might consider such an approach as too strongly rooted in traditional paradigms of data collection, storage and interpretation. A review of the landscape of digital tools available to record feelings of insecurity reveals a large amount and variety of applications already available for digital devices in many regions of the world. They allow their users to record feelings of insecurity in particular situations, share safe routes taking into account features of the city landscape in certain areas, as well as to rate entire neighbourhoods and community areas (Gstrein and Ritsema van Eck, 2018, p. 70-74). All of this is possible without the action/mediation of LEAs or experts developing surveys. This development coincides with a trend to make more data on the condition of the public space openly available. Apps like ‘Meldstad’ for the city of Groningen (Gstrein and Ritsema van Eck, 2018, p. 74), and many similar applications used increasingly by cities all over the world allow residents to share concerns on the state of public space instantaneously (Clark, Brudney & Jang 2013). Although such apps and web platforms usually serve the primary purpose of helping to maintain public infrastructure, this data might also be useful to draw insights on the feelings of (in-)security in a city.

Certainly, the use of such often unstructured information to make broad claims comes with a lot of potential problems (e.g. data protection and stigmatisation of environments; Gstrein and Ritsema van Eck, 2018, p. 74-83). However, in light of this trend towards more decentralised data collection and disintermediation, the choice of appropriate data sources and the authority over the interpretation of data is certainly not guaranteed to lay in the hands of LEAs and experts hired by them. Public authorities will have to develop governance and communication strategies to address this changed reality, particularly with the emergence of smart cities enabling an even more detailed and near-real time monitoring of public space (Sebastian et al. 2018, p. 149-150). Potentially, the answer to this challenge lies in the merger of traditional and these innovative methods, but it remains so far unclear how this could succeed in producing dependable findings.

- Mitigation policies based on perceived insecurity

The last ethical concern is the correlation between the results of surveys and the mitigation policies that are employed to tackle certain problems. If surveys indicate a rise in a certain crime type this spurs policymakers and practitioners on to tackle the perceived insecurity. However, acting on

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perceived insecurity is also a risky venture, especially if the veracity or versatility of the survey is not up to standard—resulting in mitigating strategies based on biased data. We have seen this problem occur in other policing domains too. If predictive policing systems are fed with biased data, this could result in a loss of trust for public authorities such as LEAs (Gstrein, Bunnik & Zwitter 2019).

## 4.2 Legal

- Privacy and data protection

Personal data relating to security can be sensitive and potentially needs protection. Usually, such information can only be gathered with consent of the respective individuals, taking into account the specific complications of this concept (de Hert and Papakonstantinou 2016, p. 187-188). However, the dependency on individual consent might create situations in which certain parts of a population are covered in more detail than others. For example, people feeling safer with a better socio-economic status might be more willing to participate in surveys than those living in deprived areas where there is little trust in LEAs in general. Furthermore, the state-of-the-art report has revealed that the choice of the medium of a survey in Catalonia (e.g. online or telephone) might also influence the type of answers (Davey et al. 2019a, p. 18-20). These are all indicators that the method of data collection has an impact on the findings. Nevertheless, and regardless of the type of collection, it needs to be done in compliance with existing data protection regimes to avoid negative results for individuals sharing information about their feelings on security. This means that data must be collected and processed in a transparent manner, and that it must be treated in compliance with individual data rights such as enshrined in Article 12-23 of the EU General Data Protection Regulation (e.g. transparency, access, rectification, erasure, restriction of processing, etc.).

- Individual and group autonomy

The more digital data is being collected, stored and analysed the more we know about the lives of individuals and groups. However, that also means that it becomes easier to infer how the lives of those individuals or groups look like who have not directly contributed to the data collection ('shadow profiles'). As it has been outlined in several sections of this submission, this increasing interconnectedness (e.g. apps, open data, smart city infrastructure) raises questions about the autonomy of individuals, but also about whole groups (Taylor et al. 2017, p. 235-236; Sætra 2019, p. 9). While some of these questions are addressed by data protection regimes when it comes to the individual, there might be gaps when it comes to whole groups since the data protection and privacy regimes currently do not recognise rights of groups (Gstrein and Ritsema van Eck, 2018, p. 83).

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## 4.3 Social

- Equality and differences

One social concern of measuring and mitigating feelings of insecurity relates to the level of adaptation to the social context and the differentiation in groups. The level of adaptation to the distinct social context is about the way standard reviews can be tailored to distinct social environments. If one wants to measure feelings of insecurity one needs to understand how the targeted communities should be addressed. While standardisation of surveys in the EU allows for comparative analysis, it also risks missing out certain issues when it fails to address all groups and communities effectively. In this context it should also not be underestimated that the EU has 24 official languages which makes it sometimes difficult to translate certain terms if they are also connected to certain societal contexts. Furthermore, some surveys include questions on youths being ‘unsupervised’ or ‘hanging around in the neighbourhood’. The European Crime and Safety Survey (EU ICS) mentions “unsupervised youths” as an issue that may cause insecurity which, consequently, could lead to unfair surveillance from LEAs as a result (Davey and Wootton, 2014). These questions invoke the image that young people sitting on the street equals anti-social behaviour, stigmatising a significant part of the population.

- Transferring insights into action

Ultimately, the question remains how surveys or other forms of data analysis should be translated into legitimate concrete actions. Here we see many parallels to the discussion on predictive policing, where it is impossible to avoid that the predictions made by the system start to immediately shape the reality once they are used to actually distribute LEA resources (Gstrein, Bunnik & Zwitter, 2019). Certainly, the causes and motivations leading to crime and insecurity are complex. It needs to be acknowledged that to better empirically understand how the world looks like says in itself little about how it should be from a normative perspective (Gstrein 2019).

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## 5 Empirical Investigation

### 5.1 State-of-the-art-review

The state-of-the-art review by the CCI consortium (Davey et al., 2019a) provides an overview of two regions and the approaches employed here to measure and mitigate feelings of insecurity: Catalonia, Spain and Lower-Saxony, Germany. The empirical investigation focusses on methodology and conceptualisation.

- Methodological issues

Both LEA case studies reveal a process that has evolved to include mixed methods such as telephone and face-to-face interviews and online surveys. Here we see a clear differentiation by age groups as young people are more often approached for online surveys and older generations are targeted for face-to-face or personal interviews. The rise of smartphones and the ubiquitous presence of the internet in our daily lives allows for further developments in online data gathering. We also know that gender issues and situational factors are taken into account in the analysis. A more thorough analysis of the methodology is not possible at this stage as it would require further information on how data is captured, aggregated and analysed in Catalonia and Lower Saxony.

- Conceptualising (in)security

(In)security is a complex term that can be conceptualised in numerous ways. A promising example perhaps was found in the Lower Saxony case study, which introduced a triangulation of the term:

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 rational assessment, i.e. what is the likelihood of becoming the victim of a 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? (Davey et al. 2019a, p. 26)

The differentiation in affective, cognitive and conative allows this region to paint a more subtle picture of the fear of crime. It also allows for a distinction between fear and how citizens seek to rationalise this fear and how this affects their behaviour.

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In Catalonia, the concept ‘subjective security’ is applied. This is operationalised in survey questions such as “[d]o you remember having been victim of criminal offence such as theft, robbery, aggression... in the past twelve months?” (Davey et al. 2019, p. 21). The analysis of responses to this question suggest that memory of victimisation is positively correlated with an increase in feelings of insecurity. This conceptualisation allows researchers and LEAs to better understand what types of crime have a significant impact on the wellbeing of feelings of insecurity of citizens.

## 5.2 Potential strengths & weaknesses

The main strengths of this domain, and the case studies presented here, relate to the institutionalisation of evidence-based research in law enforcement work and the desire by LEAs to understand the impact of crime better. This is a promising development, in line with the Peelian principles emphasising that the police officers are in fact citizens in uniform who require public legitimacy. In order to receive legitimacy, listening to their feelings on insecurity is a necessary first step. Another positive development is that victimisation surveys in the EU are more conducive to comparative analysis than other frameworks, such as the National Crime Victimization Survey (NCVS) in the United States (Van Dijk 2015). Previous reports on Community Policing, Predictive Policing and Crime Prevention through Urban Design and Planning (CP-UDP) emphasised that standardisation is often problematic. This fourth policing domain under development in the CCI consortium is perhaps most open to comparison, despite the challenges outlined in this report.

The potential weaknesses of measuring and mitigating feelings of insecurity by law enforcement is grounded in the ambiguity of the concept (in)security and difficulty to measure this accurately. Examples are highlighted in the state-of-the-art review on how measuring ‘fear of crime’ can lead respondents to affirmative answers for a variety of reasons, including that he or she believes it’s an important topic. This, however, does not automatically measure a fear of crime (Davey et al. 2019a, p. 34-35). This challenge is likely to increase with the diversification of data sources, new methods of interpretation and combination of data, as well as the increasing opportunity to monitor environments near-real time with smart infrastructure. All of these challenges need to be addressed by forward looking policies and toolkits relating to this area. Furthermore, there are open debates what to in- and exclude, such as the more recent inclusion of cybercrime in the Eurobarometer and in Lower Saxony. When measuring feelings of insecurity, it is pertinent to ensure flexibility on the one hand, but also to produce dependable and comparable outcomes on the other.

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## 6 Conclusions & recommendations

This report highlighted various ethical, legal and social issues of measuring and mitigating feelings of insecurity. Ethical concerns relate to the veracity and versatility of surveys, the choice of data sources and methods of interpretation, as well as the risks associated with mitigation of crime based on public perceptions. Accompanying legal and social concerns muddy the waters further and make this a complex issue to address. The empirical review highlighted that Catalonia and Lower Saxony place significant effort to capture the complexity of fear of crime and learn from previous mistakes in Europe and the U.S.

Finally, the report advises LEAs to take into account developments related to digitalisation, big data, smart city infrastructure and artificial intelligence. The datafication of social life and the redistribution of public and private space opens up new pathways to measure where crime is likely to occur—as witnessed in various LEAs in Germany, the Netherlands and the U.K. that have started investing in predictive policing tools (Gstrein, Bunnik & Zwitter, 2019). In addition to measuring where certain types of crimes, such as burglaries, are likely to happen (spatial patterns), recent developments can also locate persons of interests (Meijer & Wessels 2019). One important aspect of big data and artificial intelligence (AI) is that these tools and systems can work with various different data sources which can be captured and aggregated in near-real time. As such, analysis can happen on a much quicker turnover than surveys which can take years to complete. Whilst these developments hold opportunities for quicker surveys based on wide sources of data, there are serious risks in the analysis of complex social issues such as crime, wellbeing and feelings of insecurity (Gstrein 2019).

In conclusion, it can be stated that this highlights one of the main challenges of developing this area: remaining a human focus with the intention to design methods creating a better life for the individual and the community, while making progress in standardisation and empirical processing of the data relating to feelings of insecurity.

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