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Contact Us . info@cuttingcrimeimpact.eu

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Authors
Pilar De La Torre
Natalia Gutierrez
Carla Napolano

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CONTRIBUTORS

NAME	ORGANISATION
PROFESSOR CAROLINE L. DAVEY	UNIVERSITY OF SALFORD
ANDREW B. WOOTTON	UNIVERSITY OF SALFORD

PEER REVIEWS

NAME	ORGANISATION
PROFESSOR CAROLINE L. DAVEY	UNIVERSITY OF SALFORD

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Content

1. Introduction

1.1 CCI project

The aim of the Cutting Crime Impact (CCI) project is to enable police and relevant local regional and national authorities (i.e. security policymakers) to reduce the impact of crime and, where possible, prevent crime from occurring in the first place.

The CCI project focuses on crimes that impact negatively on citizens and their communities — including violent assault, robbery, burglary and anti-social behaviour — and the feelings of insecurity that such problems can create.

The CCI project will develop bespoke support tools, resources and guidance materials (what we term "toolkits"); these will enable police forces and policymakers in the UK, the Netherlands, Germany, Estonia, Portugal and Spain to implement effective practice. CCI also aims to encourage wider adoption of effective approaches to safety and security across Europe.

Responding to LEA partner needs, CCI adopts a comprehensive and ethically responsible approach to improving safety and security. The Toolkits will cover four approaches to policing and security policymaking:

- *Predictive policing* refers to the application of predictive and analytical techniques across large datasets to enable early identification of potential crime problems. Such systems may be used to tackle a range of high impact petty crimes, including burglary, robbery and assault.
- *Community policing* is about fostering trust, confidence and legitimacy—goals that are long term, important and strategic. Community policing traditionally involves providing a visible police presence (i.e. uniformed officers patrolling on foot), as well as actively engaging with local citizens and addressing their concerns. Such concerns cover a range of issues from fear of victimisation to problems of anti-social behaviour and incivilities. Community policing is also expected to support the prevention of radicalisation. However, resource constraints are an issue for LEAs.
- *Crime Prevention through Urban Design & Planning (CP-UDP)* prevents crimes against the person and property, as well as reducing feelings of insecurity by incorporating evidence-based urban design, planning and management measures within urban development proposals. Such measures generally seek to embed protective physical features and encourage prosocial behaviour through the design and management of a location.
- *Measuring and mitigating citizens' feelings of insecurity*. Citizens' increased feelings of insecurity are a serious consequence of high-impact petty crime. Therefore, measuring and mitigating citizens' feelings of insecurity is a key consideration for LEAs and policymakers.

However, feelings of insecurity are not necessarily caused by victimisation, but by a range of other factors—including situational factors.

There are three common principles amongst all four of the approaches / Toolkits, namely: (i) partnership working; (ii) focus on prevention through different methods; (iii) consideration of citizens' feelings of security. LEAs in Europe should be working towards a more strategic, proactive crime prevention approach—not simply relying on reactive crime reduction projects in order to tackle problems that emerge. Toolkits will support them in working in partnership to prevent crime

1.2 Work Package 2 and task T2.1

The objective of the WP2 *"Review of relevant tools in current practice and what works"* is mainly to ensure that the CCI project builds on: (i) knowledge developed by EU-funded security research projects; and (ii) good practice by LEAs across Europe, including consortium LEA partners, on tackling high impact petty crime.

More traditional content for Toolkits—and any other solution—can be adapted from existing good practice. In WP2, the CCI consortium will review guidance, tools and practice developed in the course of EU-funded projects, or in use by LEAs and security policymakers. This review will focus on the assessment of guidance and tools relevant to the Toolkits covering the four focus areas: predictive policing; community policing; crime prevention through urban design and planning (CP-UDP); and measuring and mitigating citizens' feelings of insecurity.

By analysing EU-funded projects, Task 2.1 *'Review of relevant EU-funded research projects that have produced toolkits'* aims: (i) to identify tools that have already been developed in crime prevention, whose lessons learned will serve as a frame of reference for the CCI project; and (ii) to identify what have been the main barriers to the implementation of these tools mainly for the final beneficiaries, which has allowed, or not, the sustainability and adoption of these tools in the long term.

To do this, Efus has reviewed, using the CORDIS database, relevant EU security programme-funded projects by the European Commission (FP6, FP7, Horizon 2020 and COST Actions) related to urban security and high impact petty crime. The outcome of tools and toolkits resulted from such projects have been tracked through phone interviews with project coordinators and end users.

This task has provided the CCI project with lessons learned from other experiences that will be valuable for the design of the tools in the four focus areas.

1.3 Deliverable D2.1: Inventory & review of toolkits developed through EU-funded research

This report is divided into five sections. The first section will be an **introduction to the CCI project** and of the main objectives of the Work Package and task 2.1. The second section will provide **details of the methodology employed to review the Cordis database** and the criteria used to select projects. The third section will be an **overview of the projects**, describing the different trends, relevance, topics and methodological approaches implemented in the selected projects. The fourth section will be dedicated to do an **exhaustive analysis of the information collected through the phone interviews** done with coordinators and end-users of the selected projects. Finally, the fifth section will provide **reflections, lessons and conclusion**s that could be relevant for both, the CCI project and the EU Commission.

2. Method

2.1 Review Cordis database

The research was conducted through **The Community Research and Development Information Service (CORDIS)**—theEuropean Commission's primary source of results from the projects funded by the EU's framework programmes for research and innovation (FP1 to Horizon 2020)[1]. The review has used the filter “domain of application”: security, society and industrial technologies.

2.2 Parameters of the review

The task was initiated with the selection of terms/keywords to conduct the research. Based on the workshop organised in the CCI kick-off meeting, as part of WP1-T1.1 and a listing of words related to urban security produced by Efus, a first list of keywords was generated (See Annex 1). In addition to including terms related to the topic, Efus also identified terms on the type of product (tool, toolkits, guide, instruments, applications methods...) and results of the projects.

A limited time period of 2004 to 2018 was defined for the review. This means that the programme frameworks for technological research F5, F6, F7 and H2020 (FP8) focus more upon innovation targeted research. By using the keywords, the search yielded a significant number of projects, depending on the framework of the program. For example, when using the term crime prevention the number of projects identified in FP7 was 239.

Figure 1. Number of projects thrown by CORDIS when using a specific keyword

	Crime prevention	Petty crime	Urban security
H2020	56	1	29
F7	239	15	124
F6	35	0	59
F5	10	0	55

As new terms were integrated into the search, projects that emerged from the database were repeated over and over again. Clearly, for general terms like crime prevention, the search resulted in

[1] Source: Cordis review In https://cordis.europa.eu/about/en

more projects. For specific terms such as situational prevention or feeling of insecurity, the number was much lower. It is relevant to note that crime prevention was one of the priorities of the programme FP7, which might explain the numerous results for that specific keyword.

Project to be analysed selection process

Once the keywords were crossed by project framework and classification domains, an initial list of 45 projects was obtained. A spreadsheet with information on each of these projects from the CORDIS fact sheet, and results in brief, was created. Information about the type of project, the date, the organisation involved, the objective of the project, the resulting tools and the key concepts related to CCI were taken into account.

The parameters for the selection of projects to be analysed among the 45 were: i. that the project developed a tool/toolkit/guidelines, ii. that end users were involved in any phase of the project, mainly in the implementation, and iii. that projects were finished. Based on these parametres the listing was reduced to 22 projects.

A series of interviews were carried out with the coordinators of the project and/or with some of the end users who participated in the project, either as a partner or in the framework of a pilot. The objective was to obtain more information about the level of adoption by the users of the tools developed in the framework of the project, as well as the level of involvement in the development of the tools during the life of the project and in their implementation once the project was closed.

Interviews process

In collaboration with USAL, a guide was developed to facilitate the interview. This guide meant to direct the interviewer through the main objectives of the interview and present its guidelines (Annex 2). Also, a list of interview questions was developed (Annex 3), for both coordinators and end users. The interview questions consisted of 5 parts and around 8 questions in total:

- Practical Project Outputs: information about the tools developed (including: tools, toolkits, methodologies, instruments), regarding the need that led to develop specific practical output and the process by which it was developed.
- LEAs/End User Engagement: information concerning end users involvement in the designing, development and implementation of the tools.
- LEAs/End User Impact: information about the main barriers to implementing and the sustainability of the practical output in the long term.

- Evaluation and lessons learned: information about the evaluation process, in the case the tool has been evaluated.

CCI consent form was systematically sent, signed and collected prior to the interview.

In total, 14 interviews were conducted, 9 projects from the 22 selected were touched upon. Almost 40% of the projects identified were completed with complementary information from the coordinator and end users.

Figure 2. Interviews conducted

Project	Interviewee
MARGIN	End-user
	Coordinator
P-REACT	Coordinator
UNITY	Coordinator
	End-user
BESECURE	Coordinator
CITYCOP	Coordinator
	End-user
TRILLION	Coordinator
	End-user
INSPEC2T	End-user
	Coordinator
CRIMEPREV	Coordinator
	End-user
Graffolution	Coordinator

**The codification was produced in order to respect the anonymity of those interviewed*

3. Overview of projects: country setting by coordinator and participants, target end-users involved

The general coding of the identified projects, based on Efus' analytic framework (Annex 5), provides us with a good overview of projects which have developed tools/toolkits in the domain of urban security and crime prevention. This chapter shortly presents some general developments in the CORDIS review: Trends in the number of the themes the projects relate to, the country settings, the types of tools and the stakeholders that were under scrutiny.

3.1 Trends in the number of the themes

Projects identified address a variety of topics relating to the CCI project. In the following table we can observe the important number of projects dedicated to the topic of surveillance. We can also see that topics such as community policing, crime prevention and the feeling of insecurity are among the main themes of the projects.

Figure 3. Crime focus and topics addressed by selected projects.

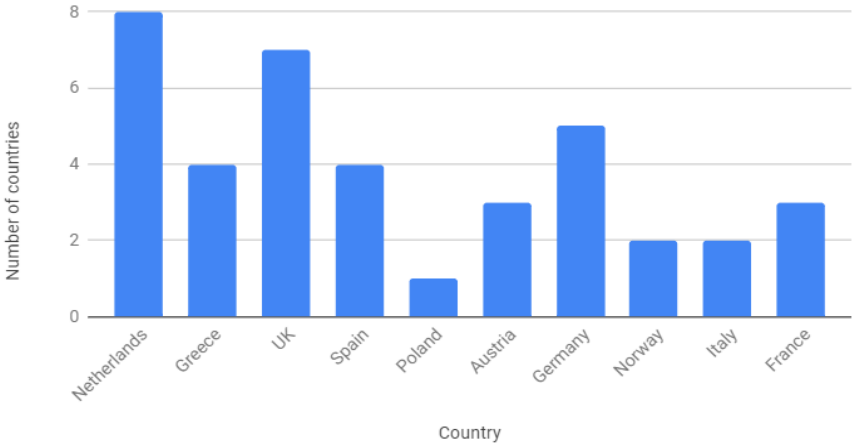
Crime Focus/topics	Number	Projects
Urban insecurity/Urban unrest	4	BESECURE CRIMPREV URBAN CRIMINOLOGY CP-UDP
Community Policing	7	CITYCOP INSPECT2 TRILLION UNITY CITY RISK EUDOCS ICT4COP

Petty crime prevention/crime prevention	7	CRIMPREV GRAFFOLUTION P-REACT SMARTPREVENT MAGNETO CRIME AND CULTURE POLICIES-2.6
Feelings of insecurity	6	INSPECT2 MARGIN EVOCS INSEC CPSI CIVICS
Prediction	2	VALCRI INDECT
Surveillance	11	FORENSOR SMARTPREVENT MEDI@4SEC SURVEILLE I-LEAD WAVESHIFT SurPRISE ADDPRIV FOCUS TARGET RESPECT
Cost of crime and knowledge on crime	5	EU ICS SCOPIC SIAM HC & CRIME VITRUV

3.2 Trends in terms of country and type of organisation leading the projects

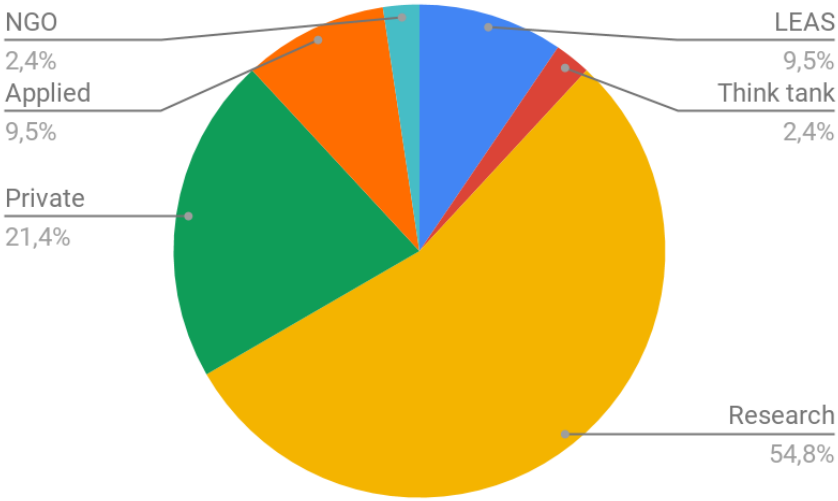
In terms of projects, from the 45 that were analysed, in which a coordinator has been identified through the means of CORDIS, we found that a significant number of the project coordinators came from the Netherlands, the UK and Germany.

Figure 4. Countries coordinating the selected projects.



Concerning the type of organisation leading the projects, more than 50% have been coordinated by research establishments such as universities and academic institutions. In second place is the private sector with a significant 21% through the likes of technology developers and security consultants. Almost 9% corresponds to organisations of applied scientific research; in this category public-private organisations, independent as for example TNO and Fraunhofer were included. As for the LEAs, they only represent 9%.

Figure 5. Type of organisations leading the selected projects



This section allowed us to have an overview of the projects funded by the EU in the framework of research and innovation programs in terms of: theme, coordinating country and type of organisation that leads projects. Although it does not represent the total number of

European projects, nor is it exhaustive concerning the field of security, it does allow us to see that in this field and above all issues related to the CCI project (crime prevention, urban safety, small crimes among others) there are trends on the variables mentioned above.

4. Analysis

4.1 Relevance of the practical outputs

For the CCI project, it is very important to understand the relevance and the impact of the practical outputs developed by other European projects, since one of the goals of CCI is to ensure that the project builds on knowledge developed by EU-funded security research projects and good practice by LEAs across Europe. Also, it was fundamental to evaluate, with the coordinators and end-users, to what extent they responded to identified needs. For that reason, all the projects that were interviewed for this report were asked about the needs assessment done before designing the tools and if they were, indeed, responding to identified needs.

In this regard, general needs were identified through the call for proposal of the EU Commission and the consortiums. Following this, most of the projects did several exercises on a local level to identify end-users´ needs during each phase of the project. In the first phases, exercises were carried out through research and literature review, subsequently by interviews, workshops, needs assessments and focus groups with local end-users, citizens and organisations working in the field. Information collected during the interviews allowed us to classify three different ways in which the needs were identified:

1. **By the EU Commission call**. Some of the projects were designed following the priorities of the EU Commission´s call. It was the case of the BESECURE project, whose objective was to improve urban security policies and the process of decision making by sharing the existing best practices throughout Europe and by providing tools and guidelines to assess their impact.

Other projects identified the needs through a combination between European Commission priorities and a process of academic research. The main objective of this type of project was to develop end-user-oriented knowledge and explore methodologies, prove theories and collect practices. These projects involved the participation of end-users like policy-makers and citizens, though the consortiums were mainly composed of universities and their purpose was usually to respond to a research gap. This is the case of CRIMPREV, which aimed to provide an opportunity for academics and decision-makers to go beyond previous cooperation and unite their resources to produce a European comparative assessment of factors of deviant behaviours, processes of criminalisation, perceptions of crime and insecurity and public policies of prevention.

2. **Participative methodologies**. Most of the projects developed participatory methodologies to collect needs and priorities from end-users and citizens. The process varied significantly between projects. Some of the projects did it in the first phase of the project, like P-REACT whose main objective was to design and develop a low cost surveillance platform that will detect petty crime

incidents. others did it all through the project and updated it in every phase. Three projects chose this process:

- CITYCOP, whose objective was to develop an application which will facilitate, strengthen and accelerate the communication between citizens and police forces;
- GRAFFOLUTION, which offered an extensive "Collaborative Knowledge Base" an "Open Information Hub" empowering city administrations, public transport services and law enforcement agencies to share statistics, knowledge, good practices and prevention strategies using intuitive modules and cooperation features; and
- TRILLION which delivered a fully-fledged platform to support community policing and extensive collaboration between citizens and LEAs.

Others projects' coordinators invested most of their time in assessing the needs during the implementation phase, focusing specifically on the particular needs identified by the cities selected as study cases. For instance, the MARGIN project which aimed to foster the creation of community resilience practices empowering citizens (especially amongst those at risk of exclusion) to better face risks and increase the public and personal perception of security, and the INSPECT2 project which provided good practice procedures that LEAs and communities could adopt in order to promote effective community policing and successfully exploit its benefit. The participative methodologies used included in-depth interviews, focus groups (thematic, technological and demographic), requirement collecting processes, workshops with policy makers and citizens and DELPHI methodologies with experts.

During the needs assessments most of the projects focused on identifying how end-users, communities and partners understood security, community policing, petty crime, crime prevention, victimisation, use of technology and other core concepts that would be essential during the projects. Then, gaps and needs were identified from the perspective of social impact of petty crime, and from end-users' expectations and requirements in terms of technology and policing service.

4.2 Type of tool and crime focus

Two types of toolkits were identified throughout the prioritised projects. On one hand the tools designed to increase in-depth knowledge, practices collection and conceptual baselines. These toolkits aimed to support and inspire end-users and policymakers in the process of identifying security threats, needs and priorities to design evidence-based policies. These toolkits usually include innovating and inspiring knowledge platforms (with concepts, recommendations for policy design and implementation, evidence-based practices and experiences from EU cities, urban data, crime statistics and databases) and mobile applications to promote different and more sustainable approaches to deal with security threats in urban areas, to strengthen the relationship between communities and LEAs and to provide end-users with collaborative joint-strategies to address these issues.

On the other hand, are the technological tools which are designed to facilitate and operationalise the practices of LEAs and their communication channels with communities. By understanding the ways in which technologies are being used to prevent petty crime or to promote alternative security practices like community policing, these projects created tools that are adaptable and flexible, that engage citizens and simplify the policing process for LEAs. These toolkits are practice-oriented and are built with the aim of developing physical, tangible and technological solutions which include *prototypes*, mobile alarms, reporting platforms, modular security portals, low-cost petty crime detectors, police training packages, gaming design and privacy and data protection mechanisms.

Projects like MARGIN, GRAFFOLUTION and UNITY are good illustrations of the categorisation previously done. These three projects aimed to generate in-depth knowledge and explore new approaches to crime and insecurity. In the case of MARGIN, tools were developed to collect security perceptions and needs of very specific groups with particular vulnerabilities. After examining how the feelings of security of some groups vary in accordance to their personal characteristics and social contexts, a toolkit was developed with specialised surveys that addressed the particular vulnerabilities and needs of specific groups such as young people, women or the elderly that are usually difficult to capture in general victimisation surveys.

There is also GRAFFOLUTION which seeks to generate in-depth knowledge to approach antisocial behaviours like graffiti vandalism—where LEAs do not have sufficient understanding or information—from new perspectives. In this sense, the generation of knowledge is combined with technological tools to help LEAs deal with and address graffiti from a more sustainable and collaborative approach with artists, municipalities, LEAs, businesses, transportation companies and communities' to team-up to reduce the occurrence of vandalism and promote shared spaces for artistic expression in approved areas. Additionally, this app is connected with a platform where LEAs can build their own strategy to address graffiti vandalism with the specific mechanisms and actions they see fit and in response to the contextual behaviour of graffiti vandalism in their city.

Finally, another example is UNITY, which aimed to define a common belief of what community policing is in terms of security and what it means across Europe in a time where community policing was not very common. To achieve this, a toolkit was developed which contained six pillars of community policing based on people's beliefs and expectations of how police should be involved in everyday community issues. These pillars were used to create community policing policies in countries where it didn't yet exist and was the most demanded tool by end-users. The pillars were complemented with the creation of a training platform for LEAs, a mobile app and analytics engineering tool to find relationships, keywords and patterns that will allow police to prevent and anticipate crime.

Projects like INSPECT2 and TRILLION, developed technological tools to effectively deal with crime through community policing, crime analytics and public policy. These tools are tangible and usually easier to adapt to everyday activities by end-users specially LEAs and citizens. In the case of INSPECT2 a modular technologic solution was designed to connect citizen´s mobile alarm systems with a software that help LEAs to collect and respond to incidents. Also, a GEO complex event processing system was developed to provide analytic components to manage algorithms from previous crimes

and criminals and to reduce the incidence of crime in specific areas. This component is mainly used for crime intelligence but it allows LEAs to respond to citizen´s needs and reports, opening new communication channels through technology and community policing.

A similar tool is TRILLION, which was used by approximately 900 end-users during the trials, who claimed it was a very simple yet very effective kind of technology for community policing. It consists of a platform that enables community policing and acquires additional information from social media and local IOT sensors like CCTV and sound cameras to recognise threats. It is connected to an app on the phone, tablet or smartwatch (multi-mobile) that either citizens or LEAs can use and where their reports, information or possible threats are collected, validated and formalised. The app integrates the principles of community policing and offers specific applications for LEAs and citizens, like a panic button that the citizen can activate and through which a text message is immediately sent to the police. This button was considered by end-users as the most useful tool since it simplifies the process of reporting security issues that are not emergencies yet require an urgent response from the police, and that are meaningful enough to be reported instantly. These tools are responding to context transformations where citizens want to communicate and share information with the police through social media, apps and next generation devices where they can register and give anonymous notice and alerts. Quality service is also a very important feature for LEAs and TRILLION developed a two-way punctuation system that guarantees quality on users reports and a score mechanism where citizens can rate the service given by the police and provide feedback. In this sense the outcomes of implementing these mechanisms will not only aim to collect information but to assure that LEAs make the best use of technology and have the highest acceptance from the communities teaming with them.

Figure 6. Type of tools developed by the selected projects.

Type of Tool	**Number**	**Projects**
Knowledge platforms	2	BESECURE, GRAFFOLUTION
App	2	CITYCOP GRAFFOLUTION UNITY
Training packages- serious games	1	CITYCOP INSPECT2 UNITY
Modular security portal- reporting platform	2	INSPECT2 TRILLION

Oriented surveys	1	MARGIN
Low-cost petty crime detector	1	P-REACT
Roadmap	1	INSPECT2

Figure 7. Crime focus or topics addressed in the selected projects.

Crime Focus/topics	**Number**	**Projects**
Urban insecurity/Urban unrest	2	BESECURE MARGIN CRIMPREV
Community Policing	4	CITYCOP INSPECT2 TRILLION UNITY
Petty crime prevention	1	CRIMPREV GRAFFOLUTION P-REACT
Feelings of insecurity	2	INSPECT2 MARGIN

4.3 Tool´s targets

In general, the tools developed by the interviewed projects were mainly designed for LEAs such as the local and national police, judiciary police, official policy designers of urban security, management officials in local government at the levels where policies and interventions are designed, public transport agencies and advisory teams to local governments. Most of them also aim to target citizens from random neighbourhoods, also specific groups such as women, young people, elders, graffiti artists, business owners, shop owners, academics and NGOs. Also, the countries that were mostly targeted for pilots were Italy, the United Kingdom and Spain, but there were also a wide variety of pilots in France, Ireland, Romania, Germany, Austria, Cyprus, the Netherlands, Portugal and Sweden.

While most of the projects involved all these end-users and tried to include as many points of view as possible, projects like P-REACT principally targeted private security companies and was designed for the use of shop owners or security guards, not for LEAs or citizens.

4.4 Barriers and enablers to implementation

Barriers in the implementation of tools and outputs of EU projects was probably one of the main challenges the consortiums of the prioritized projects had to deal with during the design, piloting and evaluation of their tools. Evidently, all the coordinators and end-users can easily identify how, after the projects are closed, some of the tools, technological prototypes, platforms and apps are not frequently used, commercialized or adopted by end-users. In this section the different barriers and gaps that challenged the implementation of the toolkits developed by the prioritized projects are identified and analysed. The analysis will be based on the information given in the phone interviews by coordinators and end-users of the selected projects.

Barriers:

1. According to the interviewees, in most EU calls there is a need to improve information sharing mechanisms between European cities and identification of best practices that had success in terms of prevention of crime. Projects like BESECURE identified during the development of the project that it is very difficult to share practices because cities differ legally, culturally and in institutional terms. What might be a good practice in one city, is not necessarily coherent and effective in another. This barrier was very difficult to overcome, that even the final, unexpected and most relevant output of the project was a far better insight of the difficulties of knowledge sharing in EU cities. In practice, sharing knowledge in not as easy as it appears to be theoretically because the EU is confirmed by very diverse and complex cities and even countries. Even if the way of understanding crime is to some extent similar in all cities, the way of dealing and responding to it is quite different.

   In this sense, international and very general tools that can be used as an European product are very useful as theoretical and knowledge insight, but in practical terms, it is very difficult for local policy makers to adapt—or even imagine how they can be implemented—and how they will work considering the size, capabilities and priorities of their cities. This doesn't mean that they are not useful and highly required by end-users, it only means that the production of general and global practices is just the starting point and will have to go through additional developments to be implemented.

2. Different lessons have been learned in terms of consortium and partnership formation. Projects like BESECURE identified as a relevant barrier for implementation due to the fact that end-users were not involved in the project since the beginning as partners. When end-users are only involved in the pilots, the will feel they are not part of the project and therefore there is no ownership in it. This led to delays in the last phases because it took a long time to explain the tools to them and to show them that the tools were actually made for them, to solve their

problems. This lack of ownership turned end-users into customers rather than part of the project. If they were involved from the beginning, implementation would probably be easier since they will be giving feedback and imagining the tools from their design considering the resources and capabilities of their agencies.

Some of the interviewed consortiums that were built with the participation and constant involvement of end-users as partners of the projects, stated that this created an ownership and in-depth knowledge that facilitated the following implementation of the tools. In cases as MARGIN, CITYCOP or INSPECT2 we can observe how end-users continue to develop, adapt and promote the use of the tools generated in the projects and pilots in new cities to implement them. Taking this point one step further, it is interesting to see how end-users are also becoming coordinators of consortiums like in the case of the UNITY project, which clearly facilitates an understanding of LEAs and end-users point of view.

3. The most recurring barrier that the prioritised projects had to deal with was related to two innovation gaps: a) The gap between the expectation of the projects and the institutional capacities, internal times and procedures at local governments; and b) The gap between the project´s expectation and the organisational barriers or apprehension to change.

The gaps between the initial expectations of how the tools will be implemented and how the implementation process actually occurs in the practice was evident in projects like CRIMPREV or GRAFFOLUTION where the lack of time did not allow them to support the processes of implementation of the projects by end-users. In the case of CRIMPREV, end-users were positive and interested in implementing the tools, but LEAs like the police take time in their decision-making. LEAs work mainly with public budget and they need to guarantee that resources are being used in effective ways. Therefore, the time required for them to justify the implementation of the tools and the need to invest in them, do not match the times of an EU project. Therefore, despite all the ideas, planning and efforts done by the consortiums and the end-users during the design of the project, the internal times and processes of decision-making take longer than the project´s life. The coordination team of CRIMPREV, for instance, explained that projects could be easily implemented by end-users or LEAs once they are approved but it takes time getting there and overcoming political willingness and internal time barriers. Sometimes, the consequence of this is that consortiums end up giving their own unpaid time and effort to support end-users in the implementation because the projects are already closed and the funding is over.

For project UNITY, the fact that LEAs need to apply for funding and budget for implementing the developed tools is also a challenge. Once the projects are over, LEAs need to go through a whole additional process of applying for budget to implement the tools designed and piloted during the project. As stated before, this process takes time and political will, and sometimes the LEAs are left alone to justify the need for such tools which makes it a very complex and demanding process for them. Some interviewees expressed how after all the effort and time put in by end-users

during the projects, it is a shame not to be able to support and accompany them during these first phases of decision-making that will determine if the tools are implemented or not.

Another interesting example of the gaps between EU projects and the institutional capacities at local governments was exposed by TRILLION end-users. This project was designed for different cities and contexts, but when it came to implementing it in the Netherlands, it was challenging since the country only has one nationwide police in contrast to the others. Therefore, there was a need to think in every tool from a national perspective, to be developed to that scale before implementing it. That effort requires more time and work than the one that the project counted with.

In innovation projects, there is a challenging gap between what the project expects of implementation and the apprehension to change and organisational barriers of LEAs and other end-users. When there is a project that involves a change in the organisational culture of LEAs such as a switch from reactive to preventive approaches, this process requires deep transformations in internal procedures that LEAs sometimes are not ready or willing to go through, or will need a lot of time and resources to accomplish. Projects like CRIMPREV observed that institutional and cultural barriers are very important here because there is a need to engage LEAs in the use of prevention tools, but it is very difficult to change from a reactive policing culture to a prevention one without enough budget or allocated resources to invest.

4. In projects that involve technology tools such as P-REACT and INSPECT2 there is a barrier that is even harder to overcome identified as the technological gap. Projects that involve IT developments, often require extra funding for the acquisition of hardware and technologies that make the implementation of the tools expensive in terms of money, time, human capital and training (learning curve). Consequently, after spending time and efforts designing, piloting and adjusting prototypes to prevent petty crime, these projects could not move forward to the commercialisation of these tools as products, so they were not further used. The main reason for this is that LEAs and end-users don't have the resources to implement the prototypes and fund all the installation and maintenance of these technological tools.

5. The projects that involved work with communities, citizens and LEAs had to deal with human barriers. The success of the tools designed by projects such as TRILLION depended sometimes in the level of maturity of the communities involved in community policing. More than an obstacle, the challenge with this is that the projects need to assess gaps from the beginning in order to have similar results between communities with high and low levels of maturity and knowledge of these issues. For example, in the pilots developed in cities in Italy where they did not know much about community policing, there needs to be a more intense and dedicated learning curve in order to have the same results as the ones in cities in Netherlands where they have been working in community policing for years. It is an easy barrier to overcome but it needs to be considered in order to adapt and succeed in the implementation of the tools. Another important challenge is

trust building and awareness, since any LEAs aiming to implement tools to improve community policing that do not count with the communities´ trust and support, will have a very hard time through the whole process.

Another human barrier that the project GRAFFOLUTION had to deal with and challenged the process of implementation of tools was the lack of skill resources and knowledge of the end-users about graffiti vandalism. Despite the fact that this is a very particular example, in general, LEAs and municipalities do not have enough resources or trained personnel in every emerging crime or thematic which makes the implementation of any tool a challenge because it will require training and investment in human capital.

6. One of the most challenging barriers in the implementation of tools, especially technologic ones, is the way in which management of personal data, storage and respect for the privacy of data varies from one country to another. In the case of TRILLION, the variations between different national regulations implied a technological barrier in implementation since it was difficult to balance between complying with specific national policies, respecting privacy and embracing a comprehensive approach of what is provided or reported by citizens. It is important to acknowledge that policies for data protection are nowhere near a barrier, but is an important consideration that has to be taken seriously when trying to deploy technologies.

4.5 General solutions and enablers

a. By applying a Concept Development Experimentation Approach (CDE) or a target plan methodology, some projects like UNITY and MARGIN could remove some of the barriers that were identified in each phase of the project and readjust or look for a plan to solve and overcome them. The idea of these methodologies is that, without doing anything different from the project plan, the consortium will try to bring solutions to end-users through an approach where they build-up together the tools in different steps (incremental). Therefore, since the early stages of the project, end-users were asked to give feedback and, in that way, the tools could be readjusted to remove barriers in the implementation. Notwithstanding in the case of UNITY, the methodology helped with some barriers but did not have success removing the big innovation gap barriers.

b. A key factor identified by TRILLION consortiums to overcome implementation barriers was the involvement of end- users since the beginning of the project where research, methodologies and tools are being designed. In this way, by involving end-users in interactive ways, it is possible to prioritise the main issues required and the potential issues or predictable barriers that will affect its implementation. One good example of this is INSPECT2 where end-users that

were doing community-policing and wanted to explore new ways to do community policing; research and technology were included as partners and involved in every step of the process.

This is very relevant since the end-users will be the ones in charge of searching for funds to implement the tools, therefore they need to feel a sense of ownership and have a complete comprehension of the tools, how they work, what are they for, what will be the result of implementing them, why should resources be invested on them and how their everyday work will be potentiated by their implementation. In the case of the project MARGIN, one of the end-users involved in the partnership was GENCAT and since the beginning they already expressed the need they had in terms of collecting information from specific groups within the communities, which made it easier for them to justify later the need for resources to implement tools that will address those needs. However, there are still political risks that can affect the implementation of the tools.

Two enablers that may guarantee an effective implementation of projects could be, in the first place, to make particular proposal calls in this programme for end-users and LEAs where, more than just their involvement, they act as coordinators and leaders of the projects. Another way will be by encouraging LEAs and end-users' participation as leaders of these kinds of projects. In this way they can design, adjust and develop the tools that, since the beginning, respond to the resources and capabilities of their agencies. UNITY is a good example of this, being led by the Police of West Yorkshire.

c. The interviewees recommended a possible solution for the innovation gap (which is one of the most common barriers in all of the projects), that could be considered by the European Commission. It consists of including a posterior implementation phase in the projects where the EU support and finance the accompaniment required by those end-users that are interested in implementing the tools designed and tested in the project. In this way, it would be possible for them to move forward from the prototypes to actually used products. This process could be led by the coordinators of the consortium and the end-user.

   Another proposal raised during the interviews was that the European Commission could support a second round of the project after it closed, where there are funds for the consortium to support the implementation of tools by those end-users that already completed all the political and institutional procedures required to get the resources and human capital to adopt the tools.

d. One of the barriers that was usually resolved despite the time it took was the process of knowledge transfer and skill growth by end-users. Since there is always limited time in these projects, it is difficult to spend the required time dealing with the lack of skill resources and knowledge gaps by end-users. Despite the fact that during the pilots most projects offer training, knowledge and new approaches to LEAs that were not very familiarised with topics like

new generation technology or community policing, if they want to continue and implement the tools, a little more training will be required, especially if there is going to be technology involved.

Some interesting solutions in this area were developed by GRAFFOLUTION who designed a step by step guide so end-users could build their own strategy to address graffiti vandalism. This guide contains different strategies and mechanisms end-users can combine and adapt to their capacities and skills. It also provides different tools that can be implemented depending on the specific level of vandalism they need to deal with. In this way, end-users participating in the project got a better understanding of the different stages of graffiti vandalism and which were the best mechanisms or tools in that portfolio of opportunities to address those specific stages (ie. repressive vs. artistic responses, information campaigns, monitoring).

UNITY is also a good example of how to deal with some of the human barriers. They developed a training where end-users were educated on the 6 pillars of community policing and the requirements/expectations of the communities. They not only developed this training, but also a module called “train the trainers” where end users could train their colleagues throughout the UNITY platform.

e. Finally, some solutions were identified in order to overcome the data protection and privacy barrier. In this regard, some projects bought servers and installed them in the end-users offices to guarantee that all the data management rules were being respected. Also, during the pilots and simulations of projects like INSPECT2 there were no external participants allowed in the activities, it was a private and controlled environment where only the target groups who signed a confidentiality form were allowed. By doing this they could respect privacy and personal data protection. Another solution, was having a permanent advisory panel checking and evaluating the protection of privacy and legal principles, and assuring that the project complies since the beginning with all the regulations.

4.6 Toolkit adoption by end users

The toolkit adoption and implementation was, in general, identified by the interviewed end-users as a challenge rather than as a success. Some of the interviewees as CITYCOP and GRAFFOLUTION could successfully move forwards into the adoption of tools and the creation of new perspectives by end-users in their everyday practice, but in general it was difficult due to three main challenges.

In the first place, despite the fact that there is a clear need and an interest of end-users in adopting most of the tools, they do not really know how to adapt adequately to fit to their daily practices. In the case of BESECURE, this was so challenging that even the objective of the project had to be adjusted because end-users could not really understand how to continue implementing the tool

without the consortium support. Not only the end-users but also the coordinators of the project acknowledge that, even if the tools were not designed as a product meant to be implemented, in case of doing it, it will take too much time, effort and resources for end-users to make the implementation of these products viable.

Secondly, in general for big cities to change their processes and their way of working is a challenge. This means that there is not only an evident lack of capacity, resources and capabilities to adopt the project´s tools, but also a discomfort in institutions who are not always able to change and transform their standardised procedures.

Thirdly, as it was discussed before, there is a clear gap between the period of time in which the projects are developed and tested and the time required for end-users, specially LEAs and policy-makers, for decision making. Since they are working with public resources, they need to follow certain rules, processes and internal times to adopt tools that will require human resources, funding and change in their daily routines. LEAs need to justify the need for funding to implement these tools and to demonstrate that the money is being used in effective ways. This requires an amount of time and does not necessarily match the times given for EU projects. In some cases where the LEAs find a way to adopt and finance the implementation of the tools, the consortium has to work and support them without receiving any funding and during their personal time.

Some of the coordinators interviewed highlighted that there is so much time and effort from end-users invested in the whole project, especially in the pilots, that once the project is finished it is hard for the consortiums to leave them alone during its adoption and implementation, even though the project is already closed and there is not any more EU funding being received for that purpose. INSPECT2, MARGIN and CITYCoP are examples of how after the projects are close, end-users keep implementing non-funded pilots and working in a process of accommodation, transformation and adaptation of their procedures to adopt the tools in a more lasting and concrete way, but all these has been done where the consortiums can only support in a limited way and without any funding.

4.7 End user feedback on estimated impact

The coordinators and end-users interviewed suggested in almost every project that the final results did fulfil their expectations and that there was always clear engagement from every participant to learn new approaches, perspective and question old paradigms. The projects had impact in the organisations that participated mainly by changing the mindset, the day to day operations and the desire for offering a better service to communities using new technologies and models that allows them to come closer and team-up. EU projects always bring a lot of knowledge to end-users and have a clear impact in the way crime is understood, but in practical terms, is very difficult to implement and adopt those lessons into more concrete policies because usually the initial expectations are too high and do not take into consideration the weight that institutional

procedures, resources and political willingness have in the moment of deciding to implement any of these tools.

End-users really appreciated the variety and the multidimensional approaches adopted by projects like TRILLION, UNITY and GRAFFOLUTION. They not only broaden the understanding on specific crimes like graffiti vandalism, but also the multiple ways in which petty crime can be addressed using technology and community policing. When tools are so varied, they have something to offer to everyone depending on their preferences, which is a very positive and practical feature since it allows end-users to adapt and adopt tools in specific ways considering the political, social and economic context and local interactions.

In projects like TRILLION, end-users highlighted the usefulness of the simple and, to some extent, easy to use tools, just as the panic button or the reporting app, that facilitate their diary operations and do not collide or affect with the already existing tools and reporting mechanisms. Some end-users feel like there are already many apps and citizens do not use them because they have one different and particular app for every activity in their community life and their interactions with LEAs and local authorities. It would be good to unify all these and create one centralised tool that is used at least once in a week and offers the citizens a whole portfolio of services and ways to engage in governance. If you do not feel obliged to access the app at least once a week, the chance of using it ever again after downloading it is very low which is what happens when every project develop a different app as their technological tool.

Considering only the feedback from the end-users interviewed, it can be said that there was not a significant gap between the coordinators and end-user's perspective regarding the impact of the projects. Both were very happy and satisfied with the accomplishments throughout the project and still believe that there is a clear need in the way these projects are designed and financed by the EU to guarantee some accompaniment throughout the process of adoption and implementation of the tool. Even in some cases like INSPECT2, once the project was over, the end-users were the ones that requested more pilots and invited new cities to explore and test the tools even though the project was over and the coordinators have already finished their products.

The interviewees from projects like CRIMPREV and MARGIN agreed that it appears to be hard for researchers to decide how to communicate and disseminate their products. They have trouble deciding which is the best way to ensure the dissemination and who is the target audience. Moreover, they identified a challenge in the long run in terms of sustainability of the tools. Who will ensure its dissemination after the project, who pays for it and for how long, were some of the questions that remained unanswered after the end to the projects.

In projects like BESECURE, the coordination team highlighted some of the most recurrent critiques that end-users express during the development of the project. One important issue is the fact that the consortium did not have any end-users as partners, which make it really hard for them to involve and explain to the end-users participating in the pilots what an EU project was looking for and how tools were something that was done for them. This is the result of having very ambitious outcomes,

such as knowledge sharing, and short-living single projects that will be offered to cities that need to think in medium to long term when adopting new tools that will require change, adjustment and investment in their implementation.

5. Conclusions: Reflections for CCI tools' development and for the European Commission

Due to the wide support and cooperation from the consortiums prioritised and interviewed by CCI team, different reflections, learned lessons and recommendations the process of developing and implementing CCI own tools will be guided. The amount of knowledge and experience found in each of the interviewees has been not only useful, but also inspiring, and appealing to them is an exercise that should be done continuously by new projects. Some of the lessons learned and reflections will guide both the development of the CCI project and also open some reflections for the European Commission. It is important to acknowledge that these reflections are not the result of an exhaustive analysis of all the projects done in terms of prevention, security, petty crime or community policing, rather than a collection of information from prioritised tools and projects that relate to the objectives of the CCI project. The information analysed for this section is mainly the result of interviews done to specific coordinators and end-users that kindly collaborated with their valuable expertise and knowledge to this report.

5.1 Lessons learned from the CCI project

a) It is important that the consortiums observe for some time for the real implementation of the tools. Most of the projects did a great job designing and piloting the tools but they did not invest enough time supporting end-users during the real implementation of these tools. Despite the fact that this process might take a long time because of the need of resources and political will, it is easier to make the first steps in this direction when the project is still open and there is enough resources, enthusiasm and evidence to justify the need of implementing these tools.

   Additionally, it is important that there is enough time left for the piloting and implementation of the tools. Usually these projects have delays during the first phases which affects the time available at the end for piloting and implementing; which is one of the most important and time-demanding phases.

b) During the pilots of the tools, there should be workshops or work sessions with the end-users where they explain their internal procedures and structures, in order to adapt the tools to those specific contexts and develop joint-strategies for implementation.

c) The tools developed by EU projects need to be sustainable. When talking about LEAs and public end-users, it is necessary to count on clear political will in order to guarantee investment, human resources and willingness to adapt and change. Otherwise, these tools will only become prototypes or learned practices that no one uses.

d) The interviews with coordinators and end-users exhibit how simple tools sometimes have more impact and are easier to implement than expensive and complex ones that will require continuous investment and human resources. When designing tools, it is very important to consider not only the type of tools that are going to be developed and the level of innovation expected, but also the feasibility of their implementation. Tools need to be simple and affordable since end-users do not count upon much resources to invest on new tools and expensive.

   Therefore, it is important that in the needs assessment there is a section where end-users display the amount of resources available for the implementation of tools, so that the tools are designed to respond to that availability, ensuring sustainability and future implementation.

f) Tools need to be flexible and adaptable enough so end-users and LEAs can implement them, taking into account the existing differences from one country to another in terms of competences, structures, technological development among others, and also in terms of advancement in their security and prevention approaches. Simple tools are easier to use and adapt to practices and procedures.

g) Legal frameworks are very important when talking about technology, data protection and privacy. It is important that consortiums count with experts on these issues, especially when working with different countries because these frameworks can vary significantly between countries. Also, it is important to consider the rights of exploitation and dissemination of the tools and to what extent they will be designed for the use of a general audience or they will be private for specific groups.

5.2 Reflections and conclusions for the European Commission

a) From the 45 projects that were collected and reviewed in the CORDIS database and which addresses issues like prevention, security, community policing and petty crime, there is an evident gap in terms of representation and involvement of countries from Eastern Europe. In terms of coordination of projects, there is a significant number of coordinates that came from the Netherlands, the UK and Germany, and in term of end-users involved in pilots, the most targeted countries were Italy, the UK and Spain. There was not a significant representation of Eastern Europe countries in these projects.

b) It would be interesting if the European Commission encouraged LEAs and end-users to participate as leaders and coordinators of projects where they will develop tools to be implemented in their own agencies. In this way, with the help of academics, NGOs, experts and citizens, they can design, adjust and develop tools that respond to their needs, resources, capabilities and internal structures.

   Moreover, it is clear that for end-users it is difficult to adapt, transform and restructure their internal procedures and culture to implement new and innovating policies. Therefore, if there is already a political will to go through with all these changes, but there are not resources to do so, it would be very helpful if the EU could open calls focused specifically on implementation support. In other words, there are already multiple calls for proposals for projects developing new tools and knowledge, but these are not always sustainable and applicable by end-users because of

multiple barriers (see section 4.2). Therefore, it will be useful for end-users that have been part of the process of designing and piloting tools from EU projects and are willing to adopt them, to be able to participate in grants from EU to support the implementation of those tools.

Another way to do it, could be by opening a second phase of the projects focused on implementation. In this sense, the consortiums that already made part of the design and pilot toolkits and are working with end-users that are willing to implement the tools, could apply for a grant for the second phase of the project which will be focused only in the implementation the tools with end-users. If there is an investment in the development of tools, there should be also an investment in its implementation, so all the work and effort that was invested in the development is sustainable and pays-off.

c) For coming calls, it is relevant that the ambition of the outcomes expected is realistic and affordable. Outcomes that require high investment in terms of resources or time, will not be implemented by end-users that do not have enough money and cannot engage in the implementation of tools that will require long-term investment in order to see their results.

6. ANNEXES

6.1 Annex 1. Keywords for CORDIS review

	Key words
A	Armed robbery
	Assault
	Assessment/ état des lieux
	Attacks, muggings
B	Bottom-up
	Built-up area, metropolitan area
	Burglary
C	Citizen participation
	City management
	Community Police, Policing
	Community Safety Partnership
	Crime
	Crime prevention
	Criminal behavior through environmental design
D	Delinquency
E	Enforcement, implementation
F	Fear of crime
G	Guideline
I	Insecurity
L	Law enforcement
	Law enforcement agencies
	Local authorities

	Local police/ municipal police
N	Neighbourhood watch
	Neighbouring/nearby
P	Petty crime
	Predictive policing
	Police forces
	Policing
	Policy maker
	Public safety
S	Safety
	Security
	Situational prevention
T	Toolkit
U	Urban planning
	Urban security and mediation association
V	
	Violence
	Victim assistance, support
	Victimisation

6.2 Annex 2. Guidelines for interviews

TASK 2.1

Guidelines for partners conducting interviews with project coordinators & end users

Introduction

Efus used the "CORDIS" database to carry out a review of projects funded by EU Commission frameworks created to support and foster research in the European Research Area, that produced results of interest to the CCI project.

The review covers FP5 to FP7 (the area of focus was technological research) to H2020 (the area of focus was innovation). Key words relating to the four CCI project themes; (i) predictive policing; (ii) community policing; (iii) Crime Prevention through Urban Design and Planning (CP-UDP); and (iv) measuring and mitigating citizens' feelings of insecurity were used to identify projects of interest.

The results from the research yielded 46 projects relating to the CCI project in terms of content and type of output. For reference the collated overview of projects can be viewed on this spreadsheet. Efus and USAL have selected 22 projects to be further analysed based on their potential to feed the next stages of the CCI project. Information will be obtained through interviews with the project coordinators and end users. To this end, Efus needs the support of the partners in conducting these telephone interviews.

Telephone interview objectives

- To collect information from project coordinators about the barriers and enablers in the implementation of practical project outputs — tools, toolkits, instruments, etc
- To collect end user feedback in terms of toolkit adoption and estimated impact.

Telephone interview process & timeline

- **Week of 3 December** – Efus contacted project Coordinators to request interviews
- **Week of 10 December** – Efus passed confirmed interviewee contact details and *Pre-interview Data Sheet* to the partner conducting the interview in an interview confirmation email
- **Week of 17 December** – On receipt of interview confirmation email, partners will: (i) confirm date and time with interviewee; and (ii) send project **information sheet & informed consent** forms for signing & returning by interviewee to partner before

interview. Partner to prepare themselves for the interview by reading *Pre-interview Data Sheet*.

- **Week of 7 January** – Interviews conducted
- **Week of 14 January** – Interviews conducted
- **Week of 18 January** – EFUS analysed interview data and collated deliverable
- **31st January** – Deliverable 2.1 to be submitted to EC.

6.3 Annex 3. Questionnaire for conducted an interview

TASK 2.1

Interview response record for interviewer

CCI partner conducting interview:	
Date of interview	
Project:	
Interviewee code:	
Interviewee role on project:	

A. Practical Project Outputs

(Such outputs may include: tools, toolkits, methodology, instruments)

1. What are the main <insert outputs> of the project?
1.1 How was the 'need' for the output(s) identified?
1.2 Which of the outputs was most practical, do you think? Which were most designed to be implemented into enduser practice?

So thinking about this <practical output>...

B. LEA / End User Engagement

2. In terms of this <practical output>, who were the primary end users?

3. How were they <primary end users> involved the development process? (ask if is possible to get in contact with them)

3.1 How were they engaged in:

– Identifying needs and requirements?

– Generating / developing solutions?

– Testing / demonstrating the output(s)?

– Supporting implementation of the output(s)?

C. LEA / End User Impact

4. To what extent did end users implement the <practical output>?
4.1 Was this more or less than expected?
4.2 Did the <practical output> lead to any change in end-user practice?

5. What do you think were the main barriers to implementing the <practical output>?
5.1 How did you attempt to overcome these barriers?
5.2 Did you develop training or other support to encourage implementation?

D. Evaluation and lessons learned

6. Has the <practical output> been evaluated?
6.1 How was this done, and who did this?
6.2 What were the results?

7. Would you like to add any other comments? Or raise anything that we have not already covered in the interview?

E. Follow-up with End User

We would really like to be able to interview <identified end user>...

8. Would you be willing to forward an email request for a telephone interview from me?

Thank you so much for taking the time to discuss the project with us

If you have indicated on the informed consent form that you would like to receive a copy of the findings of this research, we will email this to you in March 2019.

6.4 Annex 4. Identified projects

Type of project	Short name of the project	Finished/ongoing	Country	Type of organisation	Coordinator	Objective
FP7-SEC-2011-1	CORE POL	finished	Netherlands	LEAS	DEUTSCHE HOCHSCHULE DER POLIZEI	The proposed research will use a comparative design (Germany, Austria, Hungary) to establish whether better police/minority relations can be achieved through means of a Restorative Justice (RJ) approach. The extent and cultural particularities of RJ programs and their affiliation to the criminal justice system will be ascertained. Then specific minority populations (Turks in Germany, Roma in Hungary, Africans in Austria) will be examined in regard to the country's security
H2020-FCT-2014	INSPEC2T	finished	Greece	think tank	Center for Security Studies - KEMEA	The project will provide good practice procedures that law enforcement agencies and communities can adopt in order to promote effective community policing and successfully exploit its benefits. The project has the following objectives: Strengthened community policing Communicate to collaborate Increased awareness & prevention
FP7-SEC-2013-1	VALCRI	finished	UK	Research	MIDDLESEX UNIVERSITY HIGHER EDUCATION CORPORATION	The purpose of Project VALCRI is to create a Visual Analytics-based sense-making capability for criminal intelligence analysis by developing and integrating a number of technologies into a coherent working environment for the analyst we call the Reasoning Workspace. Conceptually, the Reasoning Workspace comprises of three areas: (i) a Data Space which will enable an analyst to see what data and themes exist, (ii) an Analysis Space to which data can be brought into to carry out

H2020-EU.3.7.	FORENSOR	Ongoing	GReece	Research	ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS	The FORENSOR project aims to develop a novel, ultra-low-power, intelligent, miniaturised, low-cost, wireless, autonomous sensor ("FORENSOR") for evidence gathering. The combination of built-in intelligence with ultra-low power consumption will make this device a true breakthrough for combating crime
H2020-EU.3.7	City.Risks	Ongoing	GReece	Private	SPACE HELLAS ANONYMI ETAIREIA SYSTIMATA KAI YPIRESIES	The CITY.RISKS ecosystem, which allows citizens to share safety-critical information with authorities by means of a dedicated app, is getting close to commercialisation. Pilots are being run in London, Rome and Sofia.
H2020-EU.3.7	CITYCOP	Finished	Netherlands	Research	University of Groningen	CITYCoP objective was to develop an application which will facilitate, strengthen and accelerate the communication between citizens and police forces, by making it possible for community representatives to identify the risk and immediately report it. Pilots of multilingual smartphone apps, portals and serious games training packages were deployed in Bucharest (Romania), Lisbon (Portugal), Florence (Italy), Sheffield (UK).
FP7-SECURITY	P-REACT	Finished	Spain	Private	VICOMTECH	The P-REACT project will design and develop a low cost surveillance platform that will detect Petty Crime incidents. The solution will encompass intelligent video and audio sensors to detect petty crime incidents, a cloud based monitoring, alert detection and storage platform. Technology trends in computer vision, motion detection, video retrieval,

						semantic video analysis and cloud technology will be exploited. The solution will focus on connecting citizens, business owners, infrastructure owners and security and law enforcement personnel so that Petty Crime incidents can be effectively dealt with and prevented in the future.
FP7-SECURITY	INDECT	Finished	Poland	Research	AGH - University of Science and Technology	The purpose of the INDECT project is to involve European scientists and researchers in the development of solutions and tools for automatic threat detection. The primary objective is to develop intelligent, advanced and innovative algorithms for human decision support in combating terrorism and other criminal activities, such as human trafficking, child pornography, detection of dangerous situations (e.g. robberies) and the use of dangerous objects (e.g. knives or guns) in public spaces. Efficient tools for dealing with such situations are crucial for threat detection and for ensuring the safety of citizens. Secondly, to develop threat detection in computer networks.
FP7-SECURITY	GRAFFOLUTION	Finished	Austria	Private	SYNYO GmbH	Graffolution will provide an extensive “Collaborative Knowledge Base” empowering city administrations, public transport services and law enforcement agencies to share statistics, knowledge, good practices and prevention strategies using intuitive modules and cooperation features. Additionally, the Graffolution platform will contain an interactive “Open Information Hub” addressing local communities, citizens and sprayers to strengthen public awareness and enforce the prevention of illegal spraying activities, using effectual tools and visualisations. Through the integration of social media features and channels

						young people and especially the sprayer community will be reached.
FP7-SECURITY	EVOCS	Finished	Germany	applied scientific research	Fraunhofer INT	EvoCS deals with the evolving concept of security and has a focus on the European Union and its close neighbours. The project aims at providing a holistic view on the complex to somewhat diffuse the concept of security by evaluating it across four dimensions: core values, perceptions of security, areas of security and time. Substantial research will be performed in four regional case studies, representative for the European Union:West-Mediterranean EU; Eastern EU Border; North-Western EU;South-Eastern Europe
FP7-SECURITY	SMARTPREVENT Report Summary	Finished	Spain	Private	TREELOGIC	SmartPrevent project aims to enhance detection and prevention of crimes in local urban areas by exploiting the full potential of video-surveillance systems. We will develop and provide four important benefits: i) Systematic charactersation of usual petty crimes in an area under automatic surveillance; ii) automatic detection of the most usual and frequent criminal activities; iii) a set of automated tools capable of alerting the appropriate responders; and iv) early prevention of crimes by prediction and early detection of crimes. Rather than providing new methodologies or tools, SmartPrevent will focus on: a) improving already-existing methodologies by means of a set of guidelines for the use of video-surveillance systems; and b) providing a

						set of tools capable to improve of the existing crime detection systems.
FP7-SECURITY	BESECURE	Finished	Netherlands	applied scientific research	Netherlands Organisation for Applied Scientific Research	The project 'Best practice Enhancers for Security in Urban Regions' (BESECURE) will work towards a better understanding of urban security through examination of different European urban areas. By examining 8 urban areas throughout Europe (Belfast, The UK; The Hague, The Netherlands; Freiburg, Germany; Naples and Arghilla (both in Italy), Poznan, Poland and two boroughs in London: Tower Hamlets and Lewisham), BESECURE will build a comprehensive and pragmatic set of indicators, and a pragmatic risk assessment model that can provide cues about the development of certain scenarios. BESECURE will improve urban security policy making by sharing best practices that are in use throughout Europe, and by providing visualisation and assessment tools and guidelines that will help local policy makers to assess the impact of their practices, and improve their decision making.

FP5-HUMAN POTENTIAL	INSEC	Finished	Germany	Research	UNIVERSITY OF HAMBURG	Feelings and perceptions of insecurity (e.g. fear of crime) as well as security regimes and policies (especially community crime prevention and community policing) will be examined in five major European cities. The guiding research questions will be a) how the actual transformation processes in these cities (indicated by globalisation, individualisation, social invalidation, and marginalisation) shape and change the emotional and cognitive attitudes and the behaviour of their inhabitants, b) how these changes are related to socio-spatial factors, c) which resources on an individual as well as on the communal level might be actualised and, finally, d) which policies on an national and on an European level seem to be suitable in order to prevent given and foreseeable insecurities in these and similar European cities.
FP7-PEOPLE	EUDOCS	Finished	UK	Research	UNIVERSITY OF KEELE	1. Service based platform and mobile applications 2. Techniques and tools for target citizens 3. Tools to report in real-time information about crimes, risks, incidents and any kind of local environmental issues that represent threats.
FP7-SECURITY	CPSI	Finished	Netherlands	applied scientific research	TNO	CPSI aimed to create a methodology to collect, quantify, organise, query, analyse, interpret and monitor data on actual and perceived security, determinants and mediators. The project's four main objectives were to: - develop a conceptual model of actual and perceived security and their determinants;

						- design a methodology to register and process security-related data; - develop a data warehouse to store amassed data; and - carry out an empirical proof-of-principle study to test the model, methodology and data warehouse.
FP6-POLICIES	MMECC	Ongoing	UK	Research	UNIVERSITY OF YORK	The aim of this project is to extend awareness of the methodology for estimating the costs of crime. Agencies in a few member states make significant use of this methodology and incorporate the resulting estimates in the appraisal (ex ante) and the evaluation (ex post) of interventions, projects and pilots in the criminal justice policy field. But in many states the methodology is not employed, resulting in a lack of means for developing an evidence base documenting the benefits of criminal justice interventions.
H2020-EU.3.7.	ICT4COP	Ongoing	Norway	Research	Norwegian University of Life Sciences	This project will conduct integrated social and technical research on Community-based policing (COP) in post-conflict countries in S.E. Europe, Asia, Africa and Central America. New knowledge, reflection on lessons learnt and "best practices" will support both national police and EU/International police reform assistance. The project will lead to a better understanding of police-community relations, and innovation in information and communication technology (ICT) for enhancing these relations in post-conflict countries undergoing serious security reform. Linking social and technological research, the project will study social, cultural, human security, legal and ethical

						dimensions of COP to understand how citizens and police can develop sustainable relations with the use of ICTs.
H2020-EU.3.7.	Unity	finished	UK	LEAS	POLICE AND CRIME COMMISSIONER FOR WEST YORKSHIRE	Main objectives are: Gaining best practices for cooperation between police and their communities Developing a communication tool to strengthen and speed up the communication between members of the community and the police Designing, developing and delivering training including awareness activities about Community Policing
H2020-EU.3.7.	MEDIA4SEC	ongoing	UK	Research	THE UNIVERSITY OF WARWICK	Through active research and a series of practitioner workshops MEDI@4SEC is a developing network of law enforcement agencies and public security planners which can share experience and improve the use of social media in everyday public security practice.
H2020-EU.1.1.	CIVICS	ongoing	Norway	Research	NORGES HANDELSHOYSKOLE	This project will push the research frontier by combining register datasets that have never been merged before, and by using several state-of-the-art statistical methods to estimate causal effects related to criminal peer groups and their victims. More specifically, we aim to do the following: -Use recent advances in network modelling to describe the structure and density of various criminal networks and study network dynamics following the

						arrest/incarceration or death of a central player in a network.
H2020-EU.3.7.	MARGIN	finished	Spain	Research	UNIVERSITAT DE BARCELONA	Based on previous and ongoing research activities, the project's specific aims are: (1) to create a framework enabling end-users to contrast objective and subjective measures of insecurity (i.e. compare police statistics with CVS data), (2) to develop and validate a thematic survey with a sample of 15.400 citizens that allows for the assessment of the impact of demographic, socio-economic and socio-geographic variables on the perception of insecurity (3) to investigate the socio-cultural determinants of insecurity perception through the implementation of anthropological fieldwork in five EU countries (4) to share best practices and outcomes in a final event with 100 key end-users. By deepening the understanding of the root causes of insecurity, MARGIN is expected to foster the creation of community resilience practices empowering citizens (especially among those at risk of exclusion) to better face risks and increase the public and personal perception of security.

H2020-EU.3.7.1 H2020-EU.3.7.6	MAGNETO	Ongoing	GReece	Research	INSTITUTE OF COMMUNICATION AND COMPUTER SYSTEMS	MAGNETO empowers LEAs with superior crime analysis, prevention and investigation capabilities, by researching and providing tailored solutions and tools based on sophisticated knowledge representation, advanced semantic reasoning and augmented intelligence, well integrated in a common, modular platform with open interfaces. By using the MAGNETO platform, LEAs will have unparalleled abilities to fuse and analyse multiple massive heterogeneous data sources, uncover hidden relationships among data items, compute trends for the evolution of security incidents, ultimately (and at a faster pace) reaching solid evidence that can be used in Court.
FP6-CITIZENS	CRIMPREV	Finished	France	research	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE	aims to provide an opportunity for academics and decision-makers to go beyond previous cooperation and unite their resources to produce a European comparative assessment of the following issues: – Factors of deviant behaviours – Processes of criminalisation – Perceptions of crime and insecurity – Links between illegal or socially deviant behaviour, informal economy and organised crime – Public policies of prevention
FP6-POLICIES	EU ICS	finished	Belgium	Private	THE GALLUP ORGANISATION EUROPE - S.A.	The proposed project develops the measurement tool of measuring the volume and nature of volume crime in Europe. In order to build a sound knowledge-base on crime trends in Europe and to provide the tools for evidence-based policy research related to the basic security of European citizens, survey-based comparative measurement of large sample of the European public is needed.

FP6-MOBILITY	SCOPIC	finished	uk	research	THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE	The aim of the project is to analyse, partly in cross-national comparison, the delinquent behaviour or adolescents within community contexts employing quantitative multilevel techniques. The research will focus on three concrete objectives: 1) The measurement and modelling of community context characteristics based on official and survey data on the neighbourhood level from cities in different European countries, 2) Analysis of routine activities and action spaces of adolescents which are believed to play a key role in shaping the effects of social contexts on adolescents\' delinquent behaviour, using extensive data from a time-budget questionnaire; and 3) Gender and ethnic-specific analysis of pathways into crime in social contexts.
FP7-SECURITY	SIAM	finished	germany	research	TECHNISCHE UNIVERSITAT BERLIN	The overall objective was to create an assessment support system that takes the complexity of technologies, economic aspects, cultural differences and societal dimensions into account. Thus SIAM wanted to create a holistic assessment methodology for SMTs.
FP7-PEOPLE	HC & CRIME	finished	Netherlands	research	UNIVERSITEIT MAASTRICHT	This research project aimed to understand the impact of education on criminal participation in youth. It considered different ways to disentangle the problem of factors which jointly influence decision-making in both these activities
FP7-SECURITY	SURVEILLE	finished	Italy	research	EUROPEAN UNIVERSITY INSTITUTE	The project helped decision-makers to make better choices concerning the development, deployment and use of surveillance technologies. The Consortium brought together cutting edge expertise in, inter alia, technology assessment, ethics, and law.

FP7-PEOPLE	URBAN CRIMINOLOGY	finished	Austria	research	UNIVERSITAT FUR WEITERBILDUNG KREMS	This ERG will be used to establish a new Centre for Urban Security and Facility Management in the Department of Building and Environment at Danube University Krems (A). The Centre will be a multi-disciplinary knowledge hub at the interface of urban sociology, criminology, real estate and facility management, which will be unique in European academia.
H2020-EU 3.7.1; 3.7.2; 3.7.3; 3.7.5; 3.7.6; 3.7.7; 3.7.8	I-LEAD	Ongoing	Netherlands	LEAS	THE NATIONAL POLICE OF THE NETHERLANDS	I-LEAD will build the capacity to LEAs to monitor the security research and technology market in order to ensure a better matching and uptake of innovations by law enforcement agencies with the overarching aim to make it a sustainable Pan-Europan LEA network. Earlier funded European research with a high technology readiness level as well as pipeline technologies will be closely monitored and assessed on its usefulness.
H2020-EU 3.7	TRILLION	Finished	Spain	Private	ENGINEERING - INGEGNERIA INFORMATICA SPA	TRILLION delivers a fully-fledged platform to support community policing and extensive collaboration between citizens and LEAs. The operational environment of the platform is not limited to an on-going crisis, but also extends to the period before it through early identification and prevention of emerging risks. Major challenges addressed by TRILLION include creating the necessary trust to entice provision of information, ensuring that the information leads to realistic and credible knowledge and using this knowledge through secure bi-directional communications to guide actions of individuals closest to an identified risky situation. TRILLION delivers a comprehensive service based platform and mobile applications that support the knowledge-based, real-time collaboration among law enforcement

						agents, first responders and citizens whilst ensuring that privacy and data protection are taken into account. Extensive trials take place through pilots, early validations and serious game based training across Italy, Portugal, Sweden, the Netherlands and the United Kingdom, involving close to 2.000 citizens and law enforcement agencies representatives.
FP6-CITIZENS	CRIME AND CULTURE	Finished	germany	REsearch	UNIVERSITAET KONSTANZ	A comparative cultural study' (Corruption and Crime) studied better ways to prevent corruption. The project looked at different perceptions of corruption and levels of acceptance by society in several EU countries. It examined how effective prevention policies are and how they address corruption in daily life.
FP6-2003	WAVE SHIFT	Finished	uk	Private	MICRO WAVE SOLUTIONS LIMITED	The first objective was to scientifically characterise and determine the optimum parameters for the short range motion and movement direction detection unit, exploring methodologies for enhancing detection accuracy in a variety of environments and ensuring resolution capabilities to enable the full characterisation of a commercially viable detector. to improve the performance of motion detectors in such environments through prototype testing.
FP6	POLICIES-2.6	Finished	-			Improved means to anticipate crime trends and causes, and to assess the effectiveness of crime prevention policies; assessment of new challenges related to illicit drug use

COST-ACTION/ COST TU1203	CP-UDP	Finished				To develop an advancement and innovation of knowledge and practices in Environmental Crime Prevention, in order to avoid the construction of projects that are not sustainable in terms of safety, affecting the life of present and future generations The Action, as proposed, manage to collect the highest and most different application of CP-UDP and to join them in a organic structure, merging them with other aspects of planning and management of cities. This creates the base for an acceleration in future developments of the discipline, made even more easier to realize thank to the strong network created through personal acquaintance and team working of the Action's Members
FP7-SECURITY	VITRUV	Finished	Germany	applied scientific research	RAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V	The development of a useful tool-set of computer assisted tools that enables urban planners and associated parties, such as architects or engineers to make well-considered, systematic, qualitative and quantitative assessments of urban areas regarding security issues is the goal of this project. In the long-term this will contribute to more robust and resilient cities with a quantitative balance between costs and benefits.
FP7-SECURITY	SurPRISE	Finished	Austria	Research	OESTERREICHISCHE AKADEMIE DER WISSENSCHAFT	A major aim of SurPRISE was to contribute with its results to the shaping of security technologies and measures as effective, non-privacy-infringing and socially legitimate security devices in line with human rights and European values.

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FP7-SECURITY	ADDPRIV	Finished	spain	Private	Anova IT Consulting, S.L.	The development of new knowledge and algorithms to build on existing smart video surveillance system, in order to make them comply with the Human Rights European Convention, thus enhancing the quality of living of European citizens as well as the competitiveness of European research and industry.
FP7-SECURITY	FOCUS	Finished		Research	Sigmund Freud Privatuniversitat Wien GmbH	FOCUS (“Foresight Security Scenarios – Mapping Research to a Comprehensive Approach to Exogenous EU Roles”) helped shape European security research to enable the EU to effectively respond to tomorrow’s challenges stemming from the globalisation of risks, threats, and vulnerabilities. FOCUS concentrated on alternative future EU roles to prevent or respond to incidents situated on the “borderline” between the internal and external dimensions of the security affecting the Union and its citizens.
H2020-EU.1.3.1.	ESSENTIAL	Ongoing	Netherlands	research	RIJKSUNIVERSITEIT GRONINGEN	ESSENTIAL seeks to develop security science by addressing two of its main problems: the ad-hoc approach to security research and the growing complexity of the security environment. To do so, ESSENTIAL has set itself two main goals: a) to train interdisciplinary security experts and professionals, to tackle security threats in a systematic manner and b) to increase societal resilience and security by addressing in an interdisciplinary manner 15 research topics

H2020-EU.3.7.	TARGET	Finished	france	Private	ARTTIC	TARGET will deliver a pan-European serious gaming platform featuring new tools, techniques and content for training and assessing skills and competencies of SCA (Security Critical Agents - counterterrorism units, border guards, first responders (police, firefighters, ambulance services civil security agencies, critical infrastructure operators).
H2020-EU 3.7.1; 3.7.2; 3.7.3; 3.7.5; 3.7.6; 3.7.7; 3.7.8	ILEAnet	Ongoing	France	LEAS	MINISTERE DE L'INTERIEUR	The ILEAnet project will set up and develop a sustainable network of Law Enforcement Agency (LEA) practitioner organisations from all over Europe. The mission of this network will be to stimulate LEA capabilities to influence, develop and take up research, development and innovation (RDI) that is useful and usable for LEAs, and thereby help them to tackle the major challenges they face.
H2020-EU 3.7.1; 3.7.2; 3.7.3; 3.7.5; 3.7.6; 3.7.7; 3.7.8	SEREN 4	On going	italy	NGO	AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA	SEREN4 is a 34-month Coordination and Support Action with the overall aim of strengthening the capacities of and cooperation among Secure Societies NCPs and providing high quality support and services to programme applicants and the security community at large with the view to enhancing participation in the security research and innovation area.
FP7-SECURITY	RESPECT	Finished	Netherlands	research	RIJKSUNIVERSITEIT GRONINGEN Netherlands	Review the actual effectiveness of surveillance systems and procedures used in Europe in preventing/reducing crime; and in tracking evidence for improved prosecutions of crimes and acts of terrorism.

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www.cuttingcrimeimpact.eu

Contact Us . info@cuttingcrimeimpact.eu

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