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2.1

Report Describing the State of the Art and Cross Analysis of the Focus Areas

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 882749

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Report Describing the State of the Art and Cross Analysis of the Focus Areas

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2. First Draft of Juvenile Delinquency Section	**24/01/2022**	Carla Napolano, Sarah Diemu-Trémolières, Julia Rettig and Niels Jeanty - **Efus**	**Review and Modifications**
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1 Summary of Key Findings

In what follows, we focus on providing a headline synthesis of the key **Trends**, **Tensions**, **Lessons** and **Knowledge Gaps** derived from the full *State-of-the-Art Review* of the research literature, international expert interviews and the accumulated knowledge base. Full details of the data collection processes and methods are outlined in the Methodology and Data Collection Section of the full *Review*.

1.1 Key Trends in Urban Security

Trends, here, refer to major shifts and changes over time across the period of the last 30 years. In the Tables (below), we provide an indication of the extent to which each of the Key Findings is relevant to each of the four focus areas that are the priority of the Review**: preventing juvenile delinquency**; **preventing radicalisation leading to violent extremism**; **preventing and reducing trafficking and organised crime**; and **designing and managing safe public spaces**. The threefold scale provide an approximate representation of the prevalence and/or relevance of a particular statement within the research literature reviewed relating to each focus area: ✗ = not evident; ✓ = partly evident; and ✓✓= significantly evident.

A preventive design mentality The growing awareness of 'up-stream' design thinking and early interventions that seek to anticipate harm and pre-empt criminal opportunities by effecting social and technological change rather than retrofitting solutions after the event.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓✓ SAFE PUBLIC SPACES ✓✓
The paradox of success Prevention has played a significant role in the decrease in aggregate crime rates in relation to traditional property and public crimes. Despite this 'success', crime prevention remains under-resourced and poorly implemented.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✗ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓✓
Crime prevention through environmental design The growing recognition that design modifications to the built environment can foster reductions in the incidence and fear of crime - notably the influence of the principles of Crime Prevention Through Environmental Design (CPTED) of: natural surveillance; natural access control; territorial reinforcement; maintenance and management.	PREVENTING JUVENILE DELINQUENCY ✓ PREVENTING RADICALISATION ✗ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓✓

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Naturalisation of design features Appreciation that overly crude environmental design and 'defensible space' with overt surveillance as deterrence, pay insufficient regard to aesthetics and the impact on public perceptions, hastening a trend towards a 'process of naturalisation', whereby regulation becomes embedded into the physical infrastructure and social routines in ways that are less noticeable or threatening.	PREVENTING JUVENILE DELINQUENCY ✓ PREVENTING RADICALISATION ✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓✓
Situational prevention Recognition that the incidence of crime can be effected by situational measures through modifications to the immediate physical environment in which crimes occur.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓ PREVENTING ORGANISED CRIME ✓✓ SAFE PUBLIC SPACES ✓✓
Early childhood development Increased acknowledgement of the importance of early childhood development, adverse childhood experiences and trauma in influencing subsequent individual behaviour and future trajectories of vulnerability, victimisation and offending, as well as lifelong health and wellbeing.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✗
The criminalising effects of formal responses to crime A greater awareness of the harmful effects of criminal justice responses and interactions with police and penal institutions, particularly for young people, which has encouraged forms of diversion.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓
The principle of 'do no harm' A recognition that unintended consequences can arise from well-intentioned interventions. Hence, the need to ensure the parsimony of interventions and the guiding principle of 'do no harm'.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓
Children and young people's rights The growing emphasis on the rights of children and young people and ensuring international standards and safeguards to ensure the application of those rights.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓

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The flattening of the youth crime curve Significant declines in the numbers of young people drawn into the criminal justice systems and in youth offending, as well as young people engaging in other behaviours – i.e. drinking, drug-use and smoking.	Preventing Juvenile Delinquency ✓✓ Preventing Radicalisation ✓ Preventing Organised Crime ✗ Safe Public Spaces ✓
The (en)gendering of urban security The growing importance of gender in framing urban security in terms of both the lived experiences of security and the production of safety, notably in relation to the use and quality of public spaces and domestic abuse as a community issue. In many ways, the prevention of juvenile delinquency has been dominated by the treatment and study of masculine behaviours.	Preventing Juvenile Delinquency ✓✓ Preventing Radicalisation ✓ Preventing Organised Crime ✓ Safe Public Spaces ✓✓
Understanding theories of change The growing importance of identifying the theories of change that inform how specific mechanisms trigger the anticipated outcomes; to provide a better understanding of how an intervention works or is intended to work.	Preventing Juvenile Delinquency ✓✓ Preventing Radicalisation ✓✓ Preventing Organised Crime ✓ Safe Public Spaces ✓
Multiple causes and their interactions A shift from a focus on identifying single causal factors, and the mechanisms designed to address these, to the more complex interactions and interdependencies between multiple factors and mechanisms.	Preventing Juvenile Delinquency ✓✓ Preventing Radicalisation ✓✓ Preventing Organised Crime ✓ Safe Public Spaces ✓✓
Multi-systemic approaches An analogous shift towards combining proximate or 'near' (situational) causes with more distant or 'deep' (environmental, social and structural) causes as well as multi-systemic interventions that combine individual, family, peer and community levels.	Preventing Juvenile Delinquency ✓✓ Preventing Radicalisation ✓✓ Preventing Organised Crime ✓ Safe Public Spaces ✓✓

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Obtaining information on how things worked and in what context, have driven the form of evaluation A trend beyond 'what works' evaluation design that sought to register successful outcome effects – through the conjunction of mechanisms with outcomes – towards an investigation of why particular interventions work, for whom and under what circumstances, with greater regard accorded to effects of implementation and account taken of contextual factors.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓✓ SAFE PUBLIC SPACES ✓✓
Internationally declining crime rates The significant decline in aggregate crime rates – notably in traditional offences - and the fact that this is mirrored across jurisdictions and therefore not country-specific in terms of causes.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✗ PREVENTING ORGANISED CRIME ✗ SAFE PUBLIC SPACES ✓
The harm concentration effect Despite an overall decline in levels of crime, there is growing evidence of a concentration of victimisation and offending amongst certain groups in the population and within certain (geographical) areas and neighbourhoods in ways that compound disadvantages. The unequal distribution and impacts of crime, risk and vulnerability have thus become more marked and entrenched.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓✓ SAFE PUBLIC SPACES ✓✓
Problem-based process models A gradual recognition of the importance of applying 'process models' of problem-solving methods that tailor responses to the context of local problems and populations rather than 'off the shelf' universal solutions.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓✓
A partnership approach The recognition that in its design and implementation urban security demands collaboration through multi-stakeholder responses and that the police alone cannot prevent crime.	PREVENTING JUVENILE DELINQUENCY ✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓✓
The salience of locality and place Despite globalisation, locality, 'place' and context have become more, not less, important. Global forces and the salience of locality have become increasingly mutually interdependent.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓✓

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The blurring of administrative/civil and criminal orders and regulations A growing resort to administrative regulation and civil laws (or quasi-civil laws such as anti-social behaviour regulation in the UK), as means of effecting and implementing crime prevention and urban security – in part recognition of the relative impotency and inadequacies of punitive criminal responses.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓✓ SAFE PUBLIC SPACES ✓✓
The broader conceptualisation of urban security, incorporating public perceptions A shift from a narrow focus on crime reduction to community safety, 'urban security' and harm minimisation that incorporate public perceptions of insecurities, well-being and lived experiences, as well as public trust in authorities – in part stimulated by victimisation survey data.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓✓
Citizens as the co-producers of urban security Increased recognition of the need to engage populations that are the targets of interventions as active co-producers and agents of change rather than as passive recipients of services.	PREVENTING JUVENILE DELINQUENCY ✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓✓
The strength of the informal Recognition of the effectiveness of informal responses that enlist community engagement and citizens' capacity for self-regulation through persuasion and voluntary compliance – and the corresponding limits of '*command-and-control*' based sanctions.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓✓
Evaluation for accountability, development and learning The increasing appreciation of the need for rigorous evaluation of interventions, as a mechanism of accountability, to help strengthen institutional development and to inform accumulated knowledge and evidence.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓

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Recourse to non-police information about crime, victimisation and insecurity The greater importance of victimisation surveys as an alternative (and often more robust) source of information about the nature and extent of crime and harm, which disrupts the erstwhile monopoly of the police as gatekeepers of crime data.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✗ PREVENTING ORGANISED CRIME ✗ SAFE PUBLIC SPACES ✓✓
Focus on the concentration of victimisation and harm The growing focus on victims rather than offences and offenders has highlighted the concentration of harm (through multiple and repeat victimisation as opposed to the prevalence or incidence of crime) and provides an effective and socially justifiable way of directing crime prevention efforts by integrating it with victim support.	PREVENTING JUVENILE DELINQUENCY ✓ PREVENTING RADICALISATION ✓ PREVENTING ORGANISED CRIME ✗ SAFE PUBLIC SPACES ✓✓
The challenges of policing cyberspace The shift and migration of crime from physical space to cyberspace presents new challenges given that potential victims are more abundant (easier to find given the reach of the internet) and policing/law enforcement remains territorial.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓✓ SAFE PUBLIC SPACES ✗

'I think symbolically when you do a victimisation survey, you break the monopoly of the police on the topic. In the old days, they were the ones who collected the statistics and manipulated them. So, it was totally within their universe. When you have victimisation survey data, you changed the rules of the game... So, I see the victimisation survey, more than I did in the past, as an extremely important tool in the democratisation process.'

Jan van Dijk, University of Tilburg, Interview

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1.2 Key Tensions in Urban Security

Tensions, here, refer to enduring fault-lines, recurring issues and conflicting pressures that persist across time with regard to urban security and crime prevention.

The narrow focus of research evidence to the exclusion of contextual factors A central challenge in synthesising the knowledge base is that most of the research is written by researchers for other researchers and tends to focus on exploring narrow questions of internal validity, often to the exclusion of wider contextual factors (external validity) that are of interest and value to policy-makers and practitioners.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓✓ SAFE PUBLIC SPACES ✓✓
The under-investment in the evaluation of outcomes Evaluation of the effects and impacts of preventive interventions remain patchy, limited in rigour and frequently under-resourced. This contrasts with the relatively greater evaluation of offender-oriented, tertiary, treatment programmes.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓✓ SAFE PUBLIC SPACES ✓✓
The measurement paradox There are evident difficulties associated with evaluating prevention as a 'non-event'. It is both difficult to evaluate a non-event (except in so far as comparisons can be drawn with a control sample that has not benefited from the intervention) and difficult to communicate the success of prevention (i.e. something that did not happen).	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓
The crime and security 'arms race' Crime and security problems are not static or constant, but rather innovate and evolve in response to social and technological change.	PREVENTING JUVENILE DELINQUENCY ✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓✓ SAFE PUBLIC SPACES ✓

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The evolving dynamic of crime and security

'Too few people in policy or practice acknowledge the fact that crime and security are co-evolving in an arms race: they maintain a static perspective and devote insufficient attention to the strategic imperative of out-innovating adaptive offenders against a background of changes in technology, cultural or business practices, etc., which often favour crime and render what works now, ineffective in future.'

Paul Ekblom, University of the Arts London, Interview

The punitive paradox Despite a greater recognition that the levers of crime and prevention lie outside of the criminal justice system and punitive approaches, criminal justice responses continue to dominate policy and investments in resources.	Preventing Juvenile Delinquency ✓ Preventing Radicalisation ✓ Preventing Organised Crime ✓✓ Safe Public Spaces ✓
The collaboration paradox Urban security demands the engagement of multiple stakeholders where advantage derives not simply in the combination of perspectives, resources and skills, but also in framing and shaping problems and methods differently, nonetheless where these same differing cultures, values, interests and working practices can foster conflicts.	Preventing Juvenile Delinquency ✓✓ Preventing Radicalisation ✓✓ Preventing Organised Crime ✓ Safe Public Spaces ✓

The collaboration paradox

'The possibility for collaborative advantage rests in most cases on drawing synergy from the differences between organisations, different resources and different expertises. Yet those same differences stem from different organisational purposes and these inevitably mean that they will seek different benefits from each other out of the collaboration.'

Huxham and Vangen (2005: 82)

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Wide-angled but tunnelled vision Enduring challenges pertain to the pursuit of multi-stakeholder urban security networks through horizontal exchanges of shared information, knowledge, resources or other transactions that cut across vertical *intra*-organisational priorities, which pay scant regard to the task of managing *inter*-organisational relations.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓✓ SAFE PUBLIC SPACES ✓✓
Fragmentation and central-local tensions An integrated approach to urban security is weakened by tensions between national and municipal authorities with regard to jurisdiction, competencies and responsibilities, as well as by conflicts – 'turf wars' - between central government departments operating as silos.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓
Obstacles to data sharing Data sharing and data linkage remain some of the most intractable and contentious aspects of urban security practice. A pervasive and deeply ingrained reluctance to share information between agencies persists, informed by technological, legal, organisational and cultural barriers to data exchange.	PREVENTING JUVENILE DELINQUENCY ✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓✓ SAFE PUBLIC SPACES ✓
The volatility of political commitment to urban security An uneven trajectory in the political fortunes of crime prevention influenced by exceptional events and the vagaries of political priorities, which has seen the ebb and flow of investments in prevention with political changes and a shifting focus as priorities change.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓
Myopia and the fickle cycles of political attention Narrow political horizons and short-termism serve to undermine the necessary investment in long-term preventive solutions and a fundamental shift away from traditional punitive responses to crime and harm.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓

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The quest for 'silver bullets' There remain enduring and entrenched (political) demands for uniform and eye-catching solutions – 'silver bullets' encouraged by the rhetoric of 'what works' – that can be applied, almost regardless of context or the nature of the specific problem.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓✓ SAFE PUBLIC SPACES ✓✓
The paradox of non-implementation of a problem-oriented approach Despite all the organisational and technological developments, which should have enabled greater progress, a problem-oriented approach (first elaborated in relation to policing by Herman Goldstein in the late 1970s) remains stubbornly unfulfilled.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓ PREVENTING ORGANISED CRIME ✓✓ SAFE PUBLIC SPACES ✓

The (non-)implementation of a problem-oriented approach

'I still think that our efforts to understand local problems and draw on evidence in order to try and figure out strategic ways of responding is still not really functioning as I'd hoped it would [over 25 years ago]. I'm pleased that it's still happening after a fashion, but disappointed it's been so slow, and disappointed that the development has been so uneven. I would have hoped for steady progress. If you think of the literature on diffusion of innovation, you would expect there to be a slow take up, for things to take place slowly, then to be a rapid increase and then to plateau as adoption becomes almost universal. That has not happened in problem-oriented policing.'

Nick Tilley, University College London, Interview

Trust as a vital ingredient in implementation Inter-organisational and inter-personal trust relations as well as public trust in authorities are vital to ensure the effective implementation of urban security interventions. Trust in authorities, organisations, people and systems - including security technologies - is fragile, easily broken and hard to renew or generate afresh.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓✓ SAFE PUBLIC SPACES ✓✓

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1.2.1 The Concept of Urban Security

Urban security is about more that crime reduction Urban security concerns factors that extend beyond crime reduction to incorporate public perceptions of insecurities, well-being and lived experiences. Reductions in crime may not foster or lead to reductions in insecurity and may relate to public (dis)trust in formal institutions' capacity to ensure safety.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓
Wider insecurities, social cohesion and trust in formal institutions Urban security may be intimately related to wider forces of economic insecurity, uncertainty, social polarisation and distrust in political institutions.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓✓
Securitisation versus other public goods and values Security is but one imperative that sometimes collides with other public goods or private pursuits. There has been a tendency to over prioritise security against other benefits, uses and values of public spaces – social, cultural, environmental, educational and health-related – resulting in the over-securitisation of public spaces.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓
The aesthetics of security Aesthetics and public sensibilities matter, given that security interventions can foster insecurity rather than public reassurance. One of the ironies of such quests for security is that in their implementation they may foster perceptions of insecurities by alerting citizens to risks, heightening sensibilities.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓
The potential criminalisation of social policy A tension exists between identifying the role of social, educational and wider economic forces in fostering crime and insecurity and in justifying social policies in terms of their crime preventive potential or implications. The danger is that crime and insecurity become organising frames in the exercise of authority and in legitimising interventions that have other motivations.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓✓

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1.2.2 The Ethics of Early Intervention and Measurement

Disentangling multiple mechanisms and effects The reported outcome from interventions operating multiple mechanisms is inevitably a ***net effect***, which comprises a complex mix of the balance between non-effect, positive effect and possible negative effects.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓✓
Targeted versus universal provisions There remain stubborn debates about the preference for universal provision or targeted interventions – i.e. 'primary' versus 'secondary' prevention. Targeted interventions focused on risk factors are justified in terms of effectiveness, as they target those people/factors most likely to effect change, reducing the chances of 'false positives', and cost efficiencies as they target need in more limited ways, reducing costs.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓
The stigmatising potential of targeted interventions Targeted prevention initiatives raise concerns about the stigmatising potential and labelling implications of associating specific people or places with crime. In some countries, there are strong cultural and political presumptions in favour of universal preventive services for young people justified on the basis of children's existing educational or social needs and problems, rather than future risks of criminality.	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓
The inaccuracy of risk-based predictions Targeted interventions based on risk assessments can be more effective from a cost basis but also suffer from inaccurate predictions of subsequent crime/criminality, such that they can herald intervention where negative outcomes would not actually have occurred ('false positives') and/or where negative outcomes occur despite the intervention ('false negatives').	PREVENTING JUVENILE DELINQUENCY ✓✓ PREVENTING RADICALISATION ✓✓ PREVENTING ORGANISED CRIME ✓ SAFE PUBLIC SPACES ✓

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> *'[A]ny notion that better screening can enable policy makers to identify young children destined to join the 5 per cent of offenders responsible for 50–60 per cent of crime is fanciful. Even if there were no ethical objections to putting "potential delinquent" labels round the necks of young children, there would continue to be statistical barriers… [Research] shows substantial flows out of as well as in to the pool of children who develop chronic conduct problems. As such [there are] dangers of assuming that anti-social five-year olds are the criminals or drug abusers of tomorrow, as well as the undoubted opportunities that exist for prevention.'*
>
> Utting (2004: 99)

This is particularly salient with regard to preventing juvenile delinquency where Gatti noted some time ago that the right of children and young people not to be classified as future delinquents, whether they go on to become delinquents or not, is 'one of the greatest ethical problems raised by early prevention programmes' (1998: 120). Similar considerations and concerns apply to targeting entire communities or groups of people - such as 'Muslim youths' - as has been a widespread perception with regard to some anti-radicalisation programmes. This is especially evident when measures appear targeted at people based on religion or group membership, rather than because of an actual threat or distinct risk. Inadvertently, such generalisations can foster the very outcomes that they intend to prevent.

1.3 Key Lessons in Urban Security

Lessons, here, refer to the research-informed insights and learning derived from the knowledge base through the application and evaluation of urban security practices and interventions.

- Urban security interventions, generally, are poorly informed by the research evidence base, infrequently clarify the theories of change that are intended to inform their desired beneficial outcomes, inadequately or inappropriately implemented and seldom involve rigorous evaluation, such that wider lessons might be learned.

1.3.1 Problem-Solving – Problem-Based Approaches

- In tailoring interventions to particular issues and contexts, problem-solving approaches - such as SARA (Scanning, Analysis, Response, Assessment) or the 5Is (Intelligence, Intervention, Implementation, Involvement, Impact) – provide a robust process-based framework through which to specify and better understand the nature of given security problem and guide practitioners towards better-quality interventions and their implementation.
- Working outwards from defining the specific crime or security problem and engaging with the end-users and beneficiaries of an intervention is a more effective approach than existing solutions or bureaucracies/organisations available to respond to the problem.

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- Given the siloed nature of service provision/responses and the segmented nature of knowledge and skills/resources, this demands harnessing multi-sectoral and diverse actors through pooled resources, skills, knowledge and capabilities in interdisciplinary and cross-professional partnerships.
- One of the limitations that constrained the implementation of problem-oriented policing is that it focused on the police organisation as the locus of the response to social problems when the levers to the problems often lay far from the reach of the police.

> *'The world is full of libraries full of good practices about crime prevention, urban safety and urban security but mostly nobody actually gets to test them properly because they require integrated solutions and they require collaboration.'*
>
> Barbara Holtmann, Fixed Africa, Interview

- Nothing works everywhere and a lot of things work somewhere! Context matters – configured in time and space – in the causation of crime and insecurity. Crime prevention and urban security problems are complex and informed by a tangle of interacting causes and interdependencies, which differ across problems and contexts.
- There has been a tendency to search for universal solutions under the banner of 'what works' which has drawn attention away from the situated and contextualised features of local places. And simultaneously with little regard to which groups of people benefit from particular interventions or design features in a particular place/situation at a specific time.

> *'Preventive interventions have to be intelligently customised to problem and context; success stories cannot simply be copied cookbook-fashion. Intelligent replication requires a process that customises action to problem and context. In this respect, replication will always involve some degree of innovation, trial, feedback and adjustment, whether minor or major. This in turn paces requirements on the kind and format of knowledge that security practitioners possess, and the institutional context of implementation.'*
>
> Paul Ekblom, University of the Arts London, Interview

1.3.2 Early Intervention and Preventing Juvenile Delinquency

- Early intervention in the life-course and the developmental trajectory of people and problems can prevent harmful activities before they occur or behaviour escalates. Similarly, building resilience and preventing the onset of problems before they intensify pays dividends for public safety.

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- Over the past 30 years, there has been a distinct move away from solely tertiary prevention programmes, with a greater focus placed on secondary and specifically primary types of prevention.
- There has also been a growing focus on early childhood experiences, extending to pre- and post-natal developments, assessment and provision. This has also fostered a focus on breaking inter-generational cycles of behavioural problems, violence and abuse and targeting whole families for intervention and support.
- In particular, developmental focused interventions have demonstrated promising results, but remain an area which could benefit from further research, with specific measures regarding prevention specific programmes and later outcomes on delinquency (and potential criminal lifestyles).
- Multi-risk component interventions targeted at multiple risk factors, generally appear to be more successful than single-factor interventions, but much of the data indicated that this may be a result of inadequate testing/measures for the intended behaviours.
- Much early intervention work and research remains premised on establishing correlations not exploring causation.
- There is a marked difference between North American research and the focus within Europe which emphasises limited recourse to formal criminal justice processes and institutions in addressing child and youth behaviour problems. This, in part, explains the relative lack of crime prevention specific research evidence across Europe as contrasted with the North American literature.
- Additionally, the literature examined here demonstrates a varying spectrum of scientific rigour concerning research design, and generally a lack of research that considers measures relating to the progression of juvenile delinquent acts or behaviours, and implications for future engagement with the criminal justice system (i.e. long-term assessments, context-specific measures, longitudinal studies).
- Designing broad interventions aimed at strengthening social cohesion and integration to large cohorts can have positive effects for society at large, exceeding the initial underlying intention to strengthen resilience in at-risk individuals while simultaneously minimising the risk of stigmatisation.

1.3.3 Preventing Radicalisation Leading to Violent Extremism

- Some studies have identified individual risk factors associated with radicalisation, however most have only medium to small effect sizes, many overlap with risk factors well known from juvenile delinquency, such as low self-esteem and quests for significance, and are not suitable to be used as actuarial tools of prediction.

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- Targeted, secondary prevention interventions should consider enlisting a wide support network - peers, family, teachers, coaches, religious leaders, etc. - allowing for responses tailored to individual and local contexts (Eijkman and Roodnat 2017).
- Protective factors against radicalisation include non-violent peers, bonding to school, attachment to society, highlighting the promise of broader interventions aimed at building resilience and empowerment.
- Using resilience as the foundation for an integrated framework of prevention - as proposed by Stephens et *al*. (2021) - appears to show promise due to its holistic approach and wide applicability. However, currently there is little rigorous empirical evidence to support interventions focusing on resilience (Sjøen and Jore 2019) and, consequently, more empirical evidence is needed.
- Developing inclusive and community-focused programmes ensures broad applicability, mindful of and suited to the local context.
- Experiences of participation in everyday democratic processes of dialogue and decision-making can provide an anchor to commonly held value systems, countering extremist values via a greater sense of inclusion and empowerment.
- For primary prevention programmes in educational settings and open youth work to be successful and not counterproductive evidence highlights the need to:
  - Ensure integration of all minorities;
  - Equip students with tools to learn critical thinking, rather than focusing on a particular ideology or cause;
  - Empower students with ways in which they can actively participate in the democratic process;
  - Clearly define core values (e.g. democracy, human rights);
  - Provide a safe space for exploration and discussion without the fear of referral to authorities.
- While interventions in educational settings are popular, their role in preventing onset is not yet well explored and there remains a weak evidence base.
- While significant resources have been invested in counter-radicalisation interventions, there is frequent evidence of a lack of clarity around aims and outcome measurement, which render establishing effectiveness difficult.

1.3.4 Preventing and Reducing Trafficking and Organised Crime

- The dominant approaches to organised crime and trafficking remain ones focused on law enforcement through policing, prosecution and punishment, however given their limited effectiveness as prevention strategies, some municipalities have increasingly deployed a variety of administrative measures and ordinances with some success.

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- Law enforcement strategies should focus on reducing violence related to organised crime, as well as protecting state institutions from infiltration from organised crime groups (Felbab-Brown 2013).
- Disrupting the business model and underlying structures of organised crime provides opportunities for crime prevention – including, for example, the closure of premises, the seizure of assets and revoking permits under municipal by-laws.
- Organised crime groups are constantly adapting in response to changes in technology, legislation and demand for services, hence there is a need to monitor situations and adapt policies accordingly (Caneppele and Mancuso 2012).
- Research suggests a need to examine and understand the underlying drivers facilitating the trafficking of human beings - i.e. contributing industry sectors, to target responses – and to foster policies promoting inclusion and integration of marginalised communities, reducing their dependence on crime and the illicit economy (Felbab-Brown 2013).
- Cross-border problems require cross-border solutions. Cross-jurisdictional collaboration between origin and destination countries helps us to further understand the underlying context driving the supply and demand of phenomena such as human trafficking, potentially enabling more effective measures to be implemented in response.
- Studies highlight the importance of multi-agency partnerships and inter-agency cooperation. Holistic responses are required to address the inherent complexity of the phenomenon of organised crime and trafficking. These are enhanced where a clearly defined framework of responsibilities and accountability between partners is adopted. Ineffective partnerships and a lack of information sharing are the most common reasons for implementation failure.

1.3.5 Design, Innovation and Technology

- Early intervention also demands considering the crime and security consequences of change and innovations - in technology, products and services - at the design stage, rather than retrofitting partial solutions after innovations have occurred.
- Interventions at the design stage enable up-stream, early opportunities to effect security and harm reduction outcomes, rather than retro-fitting changes after the event. Secured by Design, Crime Prevention Through Environmental Design (CPTED) and ‘defensible space’ theories have all offered important insights that have informed practical and often successful measures. The design of motor vehicle security and the subsequent decrease in vehicle related crime is a notable example.
- Designs, however, must avoid being narrowly conceived around security at the cost of other social goods and security requirements need to be creatively balanced with a range of others including, aesthetics, convenience/accessibility, social inclusion and environmental sustainability.

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- Designing in crime and security features into new interventions necessitates active engagement and responsibility on behalf of the producers of new technologies, services and products, as well as designers and architects. As the example of the Car Crime Index (in the 1980s) demonstrated, this can require significant political and organisational buy-in as designing in crime prevention and security features from the outset may be costly and disruptive to wider commercial imperatives.
- Vulnerability-led design responses or too much emphasis on security can promote fear of crime and insecurity and foster social polarisation, with adverse implications for wellbeing.
- Human-centred design solutions afford sensitivity to local context, a focus on the nature of the problem(s) to be addressed, an understanding the causes of social problems, the nature of social interactions and the ways in which people use and adapt to solutions/interventions.
- Involving communities (or representatives) in the design of interventions creates a sense of (local) ownership and participation, as well as ensuring local context is accounted for and incorporated.
- Cost-benefit analyses suggest that resources spent on security, policing and crime prevention might sometimes be better spent on other public services and essential infrastructure - i.e. health, education, transport and culture.
- There has been a tendency to prefer technological solutions – i.e. hardware – to human solutions in regard to addressing security concerns, with less regard for the intersection and interaction between social and technological processes; between technology (as hardware) and people.
- Social media and the online space is often portrayed as the cause of problems and harms, but its potential as a platform for positive intervention, learning and change should not be overlooked or underestimated.

1.3.6 Designing and Managing Safe Public Spaces

- Research highlights the value of compliance strategies that decentre the police and engage informal actors, civil society mediators and forms of persuasion, self-regulation and capacity building, rather than resort to coercive law enforcement, police, prosecution and punishment.
- By putting the community back into public space, a sense of ownership and guardianship over the space can emerge. Popular activities placed at the heart of empty public spaces can reclaim the space for legitimate users. This increases natural surveillance and the risk of detection of criminal and undesirable activities.
- Poorly maintained and managed spaces can feel unwelcoming and intimidating to legitimate users and may encourage disorder and disorderly behaviour. Interventions targeted at places and problems before they reach 'tipping points' in the escalation of risks and harms can impact positively on public perceptions and, hence, levels of use. Use of public space fosters perceptions of safety. Underused and desolate public spaces are often fear-inducing.

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- There are significant gender differences with regard to perceptions of safety in public spaces across Europe. Across time, there have been some improvements, as measured by the European Social Survey since 2002/3 (when the survey first ran). Throughout Europe, overall feelings of safety have generally improved for both genders but women remain between 2.5 and 5.7 times more likely to feel unsafe than men in almost all countries. Overall gender differences remain stubbornly persistent.
- Much of the current public space literature either presents a very narrow focus for targeting specific behaviours and the immediate circumstances in which they occur, or entails a broad urban strategy that includes safety of public spaces as elements nested within a much wider overall framework. Strategies and programmes with other motivations, priorities, rationales and justifications may, nonetheless, impact positively on perceptions of safety and experiences of security. As such, consideration should be made as to how strategies pertaining to safety within public spaces are determined, as well as how they best fit the local contexts and address local issues.
- Crime prevention as a field has historically been the responsibility of policing, but in recent decades it has shifted to include a more comprehensive approach. In developing and implementing crime prevention mechanisms and strategies within public spaces, the need for a detailed and focused planning process – based on good quality scanning and analysis - is vital to gain valuable insight from numerous departments, stakeholders and local communities.
- Effective feedback and assessment from the community is a necessary element of any crime prevention strategy or initiative to improve the design and management of safe public spaces. Our findings indicate that many cities are employing community-wide safety assessments by which local citizens provide direct feedback concerning the safety and security of their neighbourhoods. Such assessments, sometimes complemented by open-source data, offer valuable insights into communities' perceptions and priorities. It also requires authorities to consider the diverse composition of designated communities, specify the desired goals and outcome criteria and clarify the manner in which to use and share such assessments.
- From our findings, it is clear that crime prevention strategies for public spaces are more effective than simply implementing formal prevention elements. Consideration should be given to community-based strategies that decentre the police and law enforcement and engage informal actors, civil society mediators and forms of persuasion, self-regulation and capacity building aligned to local contexts and needs.
- One of the main prevention elements specifically identified in this focus area was the use of CCTV, but findings from this *Review* indicate mixed outcomes. Research suggests that CCTV has been implemented too indiscriminately with insufficient regard to the benefits, costs, outcomes and their sustainability within specified contexts. When used as an independent prevention

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element, CCTV seems to lack any particularly effective results, but can be effective when included in a comprehensive prevention strategy.

1.3.7 Data, Methods and Measurement

- Urban security demands different data than crime data alone and necessitates thinking differently about – and differently measuring – indicators of 'success' and outcomes in the evaluation of interventions. Factors such as levels of perceived unsafety, civic tolerance, social cohesion, trust in authority, community well-being and victim support are salient outcomes in urban security.

> *'Lived experience is very often ignored. When it comes to crime statistics, the reality in most communities is that you can tell people they are safe until you are blue in the face, but if they don't experience it or perceive it to be true, it doesn't matter. So, there needs to be a much bigger conversation about how we value different kinds of data, because that will influence the way we capture data and what we do with the data.'*
>
> Barbara Holtmann, Fixed Africa, Interview

- Good quality data collection and sharing across relevant organisations, as well as ethically sensitive data management and use: allow for joined-up provision; afford opportunities for joint analysis and coordinated working between relevant agencies; provide the capacity to track and support individuals and families through service provision/diverse interventions, and assess their trajectories; provide an evidence-base from which to assess effectiveness; ensure the best use of resources and facilitate best practice; and afford opportunities to monitor performance and render services accountable and reviewable.
- Good quality, shared data are vital in clarifying and defining the nature and extent of the problem(s) being tackled through focused analysis to ensure a properly problem-based intervention.

> *"If you take the view that you're trying to prevent crime on a problem-solving basis, then you need to be very clear on what the problem is, and that means you need data."*
>
> Gloria Laycock, University College London, Interview

- There is often a confusion between risk factors as 'flags' for (or indicators of) causes and casual mechanisms themselves, particularly evident in preventing juvenile delinquency. To distinguish between 'causes' and 'flags', we need to identify a plausible explanatory process (theory of change) that connects the supposed cause and effect and that actually produces the effect.

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- Interventions and their evaluation need to be clearer about the causal factors (and the theories of change) that it is assumed will cause a mechanism to produce certain desired outcomes. Hence, we need strong and credible reasons for how and why the assumed cause will produce the effect in question.
- Evaluation is important for ***development*** (to help strengthen institutions), for ***knowledge*** (to provide a deeper understanding of specific questions or fields) and for ***accountability*** (to measure the outcomes and their effectiveness/efficiency).
- Methodologically, the 'what works' movement - through its emphasis on quasi-experimental methods and random control trials - has (deliberately) focused attention on single interventions and sought to remove contextual factors and the analysis of the implementation processes, in order to highlight constant conjunctions.
- Programme evaluations need to play greater attention to both the context and the processes of implementation in informing ***what works, where and for whom***.
- For evaluations to be meaningful, the aim of the intervention needs to be clearly defined, as do subsequent outcome measures by which the success of the intervention can be assessed.
- Rather than seek to evaluate the presence or absence of a successful crime preventive effect, there is a need to explore the causal mechanisms (or 'theories of change') that are believed to underlie and produce those effects/outcomes (or their absence). Understanding how something works or is intended to work, enables more focused design of interventions that also take account of contextual factors.
- Knowledge about failure and of undesired side effects is as important as learning about success. Urban security evaluations tend to focus on success stories and in policing interventions too often appear 'doomed to succeed' (Crawford 2017: 204).

> *'The evidence base is incredibly immature, if you're looking for specific initiatives. But I think we've got a huge amount of knowledge about how to solve problems… And I think the police need to behave like engineers. They need to experiment. They need to try things. They need to see if they work or not. The trouble with police culture is they're not allowed to fail. And if you're experimenting, you are taking risks and you're risking failure. And there's a huge cultural reluctance to take risks for all sorts of understandable reasons.'*
>
> Gloria Laycock, University College London, Interview

1.3.8 Implementation Matters

- The overwhelming lesson from the last 30 years is that the institutional context and resistant organisational cultures have often undermined the implementation of research-informed urban security and crime prevention. It is not that the science is poor with regard to crime prevention

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and urban security – although it is inevitably incomplete, in some places inadequate and shifting in the light of technological and social change - but rather that it is not being implemented or implemented in inappropriate ways, circumstances and situations that constitute the most basic contemporary challenge.

> *'We are left wondering why we cannot implement measures that we know will work, reduce crime, and cost less for law and order.'*
>
> Irvin Waller, University of Ottawa, Interview

- The importance of political leadership, public trust and institutional commitment, support, appropriate levels of resources and buy in from relevant stakeholders are all pivotal to the success of interventions.
- Communicating the successes of crime prevention and the effectiveness of up-stream early interventions in ways that elicit long-term political commitment and organisational change remain a considerable challenge.
- There is a long history of successful experimentation in urban security with robust evaluation to support their effectiveness and impact, but the lessons from which are not mainstreamed and realised in routine organisational practices or not appropriately transferred to other places and populations.
- Demonstration projects may provide interesting insights and learning but will result in little change if they are not embedded within infrastructures that align with cultural values, underpinned by sustainable funding and supported by long-term organisational commitments.
- Effective multi-stakeholder partnerships require: shared ownership; clearly defined outcomes and expectations of each contributing partner; acknowledgement of asymmetries of power differentials; constructive negotiation of conflict; mutual understanding and regard for difference; trust and information-sharing; and meaningful engagement with end-users and beneficiaries.
- Developing shared values in collaboration demands that partners understand each other's priorities, values, positions and limitations well enough to have meaningful dialogue about the different interpretations of the problem, and to exercise collective intelligence about how best to seek to resolve it.
- Insufficient regard has been accorded to understand the diffusion of innovations and the structural features of organisations, including their propensity to take up new knowledge (***absorptive capacity***) and the presence or not of ***a receptive context for change***, including things like organisational culture and environment (Greenhalgh *et al*. 2004).
- Responding to public perceptions of insecurity by providing additional security interventions, technologies or hardware may fail to engage with the issues underlying these demands. It may

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also miss the opportunity to subject these demands to rational debate and local dialogue. Hence, the need to engage local publics, stakeholders and user communities in genuine problem-solving processes that investigate beyond the immediate appearance or superficial expression of security problems.

- Seeking solutions to problems of local order through security alone may serve to exacerbate population's fears and entrench perceived lines of difference within and among local communities.

1.4 Key Knowledge Gaps

Compared to the field of healthcare and medicine, the urban security evidence base remains embryonic. While much has been learnt about the effectiveness and efficacy of urban security interventions over the past 30 years, there remain persistent knowledge gaps and uncertainties in the face of technological and social change. In the field of urban security where risks and harms are continuously changing, moving and evolving in dynamic fashion, there are both 'known unknowns' and 'unknown unknowns'. Here, we focus on the former.

- Predicting future crime and security trends and developments, given their dynamic nature is intrinsically difficult.
- All evaluations produce knowledge of what worked (in the past) for a particular population, under specific circumstances, at a particular time and may not hold for a future population at a different place or time. The inferences that can be drawn are contingent.
- The knowledge base with regard to causation and the causal interactions between multiple factors remains limited.
- The role that social, educational and welfare provisions play in shaping the propensity for crime and criminal behaviours remains poorly understood.
- Too little is known about and insufficiently robust data are collected concerning the processes of implementation that influence the effectiveness of urban security interventions.
- There is insufficient understanding of the ways in which context shapes successful outcomes and the nature and extent to which particular preventive mechanisms are context-determined or context-dependent.
- More can be learnt comparatively about the ways in which urban security interventions and their effectiveness are shaped by differing culture, social practices and legal, political and administrative frameworks.
- There is a need to better understand the extent to which crime prevention lessons from the physical world translate into cyberspace and their possible application (or not) to online environments.

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- The implications for urban security of artificial intelligence (AI), machine learning and algorithms build into products, services and utilities are largely uncharted, as expert knowledge and processes of interpretation are replaced by machine learning and automated decision-making. What we do know is that these algorithms are not impartial but embed with different assumptions about behaviour and risk that are opaque and obscure. As such, they raise fundamental ethical and normative questions about the values that inform the future of urban security.
- Climate change, an ageing population and growing social polarisation, diversity and inequality are all likely to interact with wider social and technological change in ways that are more complex, interconnected and interdependent, raising new challenges for the tense relationship between liberty, security and other social values.

There is a greater need for urban security researchers, policy-makers and practitioners to better understand the limitations and constraints of the other parties' motivations, values and priorities in co-producing effective interventions. Certainly, the last 30 years have witnessed a greater mutual recognition across these different professional groups often forged through greater partnership working. There remains, however, considerable scope for further collaborations that engage researchers, practitioners and policy-makers/administrators in the process of mutual learning, knowledge generation, programme co-design and implementation of the kind that the IcARUS project is advancing.

This requires a degree of 'boundary crossing' that recognises the differences which structure social worlds and organisational groups, but also the need to work across these in dynamic ways that prompt continual reassessment of assumptions, critical self-reflection and questioning of terminology. Realising organisational change in this context demands building inter-professional relationships of mutual respect, fluid and permeable disciplinary boundaries and the absence of a rigid hierarchy of knowledge forms, as well as a normative concern with action and practical outcomes.

Ultimately, research evidence is only one element in the development and design of contextually appropriate and legitimate urban security intervention that address particular problems, in given situations, at a specific time. Given the breadth of their competencies and role as local anchor institutions, city/municipal authorities – working in partnerships with various public, private and third sectors service providers – have a vital role to play in ensuring inclusive urban security policies that serve the needs of diverse communities and that harness expertise, resources, data and commitment of multiple actors in the interests of public safety, while simultaneously balancing these with wider social value judgements that inform the ethical principles, preferences, culture and aspirations of a society.

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2 Introduction: Urban Security Developments Across the Last 30 Years

Across Europe, crime prevention and urban safety strategies have travelled a long journey over the last 30 years, since the European Forum for Urban Security (Efus) was first established in Barcelona in 1987, under the auspices of the Council of Europe. A year earlier in the UK, Mollie Weatheritt (1986: 49) astutely observed that in the police 'the crime prevention job remains an activity performed on the side-lines while the main action takes place elsewhere'. At that time, prevention was the specialist 'Cinderella' function of the police, often acting alone. However, in response to escalating crime rates and a growing pessimism in the capacity of criminal justice to deter, reform or rehabilitate offenders, let alone prevent crime in the first place, a fundamentally new approach to the local governance of crime emerged in the 1980s (Crawford 1997). Taking slightly different forms and distinct inflections in different jurisdiction, this variously emphasised:

- A focus upon pro-active *prevention* - rather than reactive detection – with an emphasis on 'up stream' early interventions into the life-course of problems and people through the identification of risk factors that might pre-empt crime and criminality;
- An emphasis upon *wider social problems*, including broadly defined harms, anti-social behaviour and disorder and their interdependent associations with crime;
- A focus upon modes of *informal social control*, as well as the manner in which they relate to, and connect with, formal systems of control;
- A 'de-differentiated' response that is not compartmentalised but affords a generalised, non-specialist activity designed into the architecture and built into the routines and consciousness of all citizens and organisations;
- Implementation through decentralised, *local* or city-level arrangements –reflecting the view that 'local problems require local solutions';
- Delivery through a multi-agency *partnership* approach, drawing together a variety of organisations, stakeholders and members of the citizenry in horizontal networks;
- Aimed at the coproduction of *holistic solutions* that are 'problem-oriented' rather than defined according to the organisations most readily available to respond to them.

This novel approach involved government (both central and local) in seeking to act upon crime less in a direct fashion through state agencies - such as the police, courts, prisons, probation - and more by indirectly stimulating action on the part of non-state organisations (in the private and voluntary sectors) and members of the public. In some countries, this found institutional form in urban security partnerships - such as the statutory responsibilities set out in the Crime and Disorder Act 1998 in England and Wales. Elsewhere in Europe, it resulted in analogous, yet distinct, regional, city-level and/or local arrangements. In France a socially-rooted variant was championed by mayor Gilbert Bonnemaison, whereas in the UK a more individualistic and situational model was initially embraced, championed by Ron Clarke (1980; 1995) and others in the Home Office. Generally, the urban security approach focused as much on seeking to prevent and pre-empt future harms as it did on (normatively) reordering the past by 'doing justice' through traditional reactive and punitive processes.

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Profoundly, this new approach recognised that the levers and causes of crime lie far from the traditional reach of the criminal justice system. It acknowledged that there is no single agency solution to crime, which is multi-faceted in both its causes and effects. Furthermore, it recognised the need for social responses to crime which reflect the nature of the phenomenon itself and its multiple aetiology; allowing for a joined-up approach to crime and community safety; and afforded the potential coordination and pooling of expertise, information and resources. The new architecture of local urban safety partnerships - in theory, if not in practice - challenged many bureaucratic assumptions about professional expertise, specialisation and disciplinary boundaries. Led by pioneers such as Michel Marcus, the European Forum was at the forefront in promoting this paradigm shift, notably through city-to-city networks of learning and sharing best practice as well as fostering an acceptance that this should be informed by the best research evidence. It is upon this legacy that this *Review* builds.

2.1 Aims of the Review

The principal aim of this *Review* is to synthesise the urban security knowledge base that has accumulated over the last 30 years of development; in particular, the body of research evidence that exists in each of the four focus areas: (1) preventing juvenile delinquency; (2) preventing radicalisation leading to violent extremism; (3) preventing and reducing trafficking and organised crime; and (4) designing and managing safe public spaces. The intention is to draw out key lessons, trends and underlying principles that enable us to better understand effective methods, interventions and implementation processes, as well as to reflect on criteria of effectiveness. The explicit terms of reference for the *Review* are *'to characterise developments and changes in the area of urban security, in the four focus areas over the last 30 years, analyse how prevention policies have responded to these challenges and identify institutional barriers to their implementation'.*

For our purposes, we reduced this to four key questions that informed the *Review* and its methods of data collection (see *Methodology and Data Collection,* Section 9). These are:

1. What do we know about the effectiveness of prevention initiatives or programmes in the field of urban security (and the four focus areas) and how has this changed over the last 30 years?
2. What do we know about the importance of context and implementation in shaping the effectiveness of urban security interventions?
3. What knowledge gaps and which institutional barriers persist?
4. What lessons can be learnt from the accumulated knowledge base that should inform future innovative approaches to urban security?

It is intended that this *Review* constitutes a valuable resource for the IcARUS project and serves as the foundation upon which the subsequent work is built in designing and implementing innovative approaches to urban security at the municipal level. The IcARUS project seeks to overcome some of the central findings highlighted in this *Review* - namely that urban security interventions, generally, are poorly informed by the research evidence base, infrequently clarify the theories of change that

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are intended to inform their desired beneficial outcomes, inadequately or inappropriately implemented and seldom involve rigorous evaluation, such that wider lessons might be learned. The programme of work aims to provide a transformation in the application and utilisation of the knowledge base by framing and informing a human-centre design thinking methodology in the co-creation and implementation of urban security strategies and practices. By rethinking tools for urban security policy in combination with the insights from research, policy and practice, the IcARUS project offers a unique opportunity to draw together the best evidence from urban security research and practice over the last 30 years to implement an integrated, evidence-based and multi-stakeholder approach to prominent urban security problems.

In what follows, we set out first to define the broad parameters of this *Review* and introduce the focus on the knowledge base, its limitations and the central relationship between mechanisms (interventions or programmes), context and implementation, as a way of highlighting certain methodological and epistemological preoccupations within the research literature. We then go on to explore the vexed differences and disparities between evidence, policies and practices. This latter discussion is intended to go some way to contextualise and clarify the connections and variance between this *Review* (Task 2.1) and the focus and findings of the IcARUS *Inventory of Tools and Best Practices* (Task 2.2), which seeks to analyse urban security policies and practices in European cities and regions.

Each of the four focus areas are explored and considered separately (in Sections 3-6). Each has its own theoretical underpinnings and empirical challenges, which are discussed, however, this *Review* is not intended to be encyclopaedic or comprehensive in its coverage – the issues and associated research literature are simply too vast to do so. Rather, it is selective in drawing out broad lessons that might strategically inform future designs and practices. The *Review* is based on a scoping review of the English-language research literature in the four focus areas since 1992, supplemented by interviews with a selected number of international research experts in crime prevention and urban security (n=19), and interviews with key professionals (n=18) from our six city partners – Lisbon, Nice, Riga, Rotterdam, Stuttgart and Turin (see Table 2.1). It also benefited from input and feedback from our academic consortium partners at Panteion University of Social and Political Sciences, University of Salford's Design Against Crime Solution Centre, Salzburg University of Applied Sciences, the Centre for Security Studies (*Kentro Meleton Asfaleias* – KEMEA) in Athens, and colleagues at the European Forum for Urban Security (Efus), as well as members of the IcARUS Expert Advisory Board. For a detailed overview of the data collection parameters and processes, as well as the names of the international experts interviewed - see the *Methodology and Data Collection* (Section 9). Here, we focus on the broader issues that pertain to urban security generally and, in Section 7, we draw out some of the cross-cutting themes and implications.

The number of studies included in each focus area's review, as well as the number of interviews with partner cities and urban security experts is summarised in Table 2.1 below.

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Table 2.1: Summary of Data – Studies and Interviews

STUDIES		**No. Studies**
Preventing juvenile delinquency		62
Preventing radicalisation leading to violent extremism		29
Preventing and reducing trafficking and organised crime		15
Designing and managing safe public spaces		4
INTERVIEWS	**Interviews**	**Participants**
Partner cities	12	18
International experts	16	19

2.2 Defining the Parameters of the Review

For the purpose of clarifying the conceptual parameters of this *Review* and to ensure a shared understanding of its scope and terminology, we set out below working definitions of three key concepts that pervade our focus: 'urban security', 'crime prevention strategies' and 'multi-stakeholder partnerships'. In relation to each we offer, first, a working definition and, second, an explanation and understanding of this definition for our purposes. By way of caution, we are not seeking to outline a comprehensive or philosophically complete definition but rather to identify useful conceptual tools that have been deployed strategically in this *Review* and data collection process, and which are outline here to help provide greater conceptual clarity for the reader.

2.2.1 Urban Security

Urban security is a condition of the safe coexistence and social cohesion of people in all urban spaces. It implies an intentional approach – through planning, design, interventions or regulation - in the present and in the future to address the actual or perceived lack of security fostered by crimes and harms that adversely impact on shared urban environments and public spaces.

The focus is on deliberate and purposive efforts to render urban places secure in ways that seek to assure people of their safety both in the present and in the future. This includes intentional policies, practices and innovations, which seek to address not only actual but also perceived insecurities. As such, urban security has a future-orientation and instrumental logic that deploys preventive and anticipatory strategies and actions. It departs from justice-based interventions that tend to provide normative responses to past events, harms or crimes. Given the interdependent and interconnected nature of contemporary insecurities and harms, urban security straddles the competencies and responsibilities of any individual public, private or civil society organisations. It combines measures that incorporate dimensions of social cohesion, prevention and repression or control. Urban security focuses on the ways in which security is planned, designed and managed at the city level,

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taking into consideration the uneven spatial and social distribution of insecurities and crimes across urban environments. As such, urban security departs from national security, on the one hand, and neighbourhood security on the other. This *Review* also explores the application of human-centred 'design thinking' to urban security.

2.2.2 Crime Prevention Strategies

Deliberate interventions that seek to reduce the likelihood of crimes occurring and their harmful effects on individuals and the society. Crime prevention strategies can be understood as interventions that attempt to alter behaviour or the flow of events with the intention to prevent or diminish the level or impact of crime, particularly those targeted at the general population or 'at risk' groups.

Crime prevention strategies are pro-active, pre-emptive and anticipatory, they include a wide range of actions and interventions prior to a criminal event that seek to interrupt a chain of causation which it is believed otherwise would have ultimately led to a criminal event. Hence, crime prevention strategies embody assumptions – 'theories' – about both: (i) why criminal events occur (*crime causation*) and why certain interventions are believed to prevent criminal events from occurring (*crime prevention*) (Crawford 1998). Measurements of crime prevention effects are intrinsically difficult as they involve a non-event; i.e. something that does not actually happen. It requires measuring what might have happened or happened elsewhere without the intervention (Tilley 2005).

Given that crime prevention strategies can include a vast array of public, private and law enforcement initiatives and programmes, it is useful to consider different attempts to demarcate types of crime prevention. Brantingham and Faust's (1976) public health analogy remains useful as it raises important questions about the intended targets or audience for crime prevention interventions: (1) *primary prevention* is directed at modification of criminogenic conditions in the physical and social environment at large and/or the general population; (2) *secondary prevention* includes interventions targeted at individuals, groups or places identified as 'at risk' due to some (pre-)dispositional attributes or diagnostic predictor of risk factors; and (3) *tertiary prevention* is targeted at known offenders to reduce further crimes or the harm associated with them and is largely directed at the prevention of recidivism and any escalation of harm.

For the purpose of this *Review*, primary and secondary prevention strategies - sometimes differentiated as 'universal' and 'selective', respectively - are the focus of analysis, as they relate to mechanisms that seek actively to prevent crimes from occurring, as compared to the more reactive type of prevention – often associated with institutions of criminal justice - which occur with tertiary forms of prevention. This also highlights the diverse actors involved in crime prevention beyond the institutions of criminal justice (Crawford 2009a), reinforcing Jan van Dijk's (1990: 205) early definition of crime prevention as: 'the total of all policies, measures and techniques, outside the

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boundaries of the criminal justice system, aiming at the reduction of the various kinds of damage caused by acts defined as criminal by the state'.

2.2.3 Multi-Stakeholder Partnerships

A functional collaboration between organisations from different sectors, professions, stakeholders and interest groups that involves the pursuit of a common purpose in order to deliver co-ordinated problem-solving that combines different competencies, skills and resources to achieve agreed outcomes. The added value of these partnerships is to achieve outcomes that could not have been accomplished by any organisation acting alone.

There are two key aspects in the concept of multi-stakeholder partnerships, namely the notion of collaborative partnerships and the stakeholders that comprise them. First, 'partnership' refers to a strategic alliance created to provide coordinated and holistic solutions or interventions to complex problems that straddle the competencies and levers of control of individual organisations. However, the benefits of partnerships also highlight a core paradox that collaborative advantage rests in most cases on drawing synergy from the differences between organisations, different resources and different expertise, yet those same differences stem from different organisational purposes and these inevitably can mean that partners seek different benefits from each other out of the collaboration. Second, 'stakeholders' are those organisations or actors that have specific skills, competencies, knowledge and resources, which combined enable the delivery of the project's goals. This begs the fundamental question: which stakeholders are included within a designated partnership structure (and by implication, which are not included)? Multi-sector stakeholders might come from public sector, private sector, civil society and the public. Given the focus on 'urban security' and the city level, the nature of relevant stakeholders may be framed by this scale of analysis.

2.3 Understanding the Knowledge Base and its Limitations

One of the central challenges in synthesising the urban security knowledge base is that currently most of the research is written by researchers for other researchers. It tends to focus on exploring certain narrow questions, often to the exclusion of wider contextual factors of the kinds that are of interest and value to both policy-makers and practitioners. Researchers are interested primarily in understanding the relationship between a specified **mechanism** – an intervention or programme – and the resultant **outcome effects** that it is believed the mechanism generates. To do so, researchers are interested in establishing the 'internal validity' of any study into this relationship of cause and effect. This is particularly evident in systematic reviews and meta-analytic reviews. *Internal validity* refers to how well an evaluation is conducted and the trustworthiness of the study in terms of the relationship between an intervention and an outcome. However, to strengthen internal validity often requires ruling out or ignoring wider contextual factors, so that the key variables can be held constant – or as close to constant as possible – in the study.

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This is conventionally believed to be best achieved through quasi-experimental designs that test the effects of the mechanism on a particular place or group of people utilising a pre- and post-test measurement, which are replicated in a control group (or area) where no intervention has occurred (Campbell and Stanley 1966). The implication is that if fluctuations in crime rates (either upward or downward) are repeated in the control group (or area), then they are deemed likely to be the product of general trends external to the given areas. Relatedly, differences between the experimental and control group (or area) are then attributed to the intervention, upon the assumption that this is the only known difference between the groups (or areas).

Full experimental methods are largely unavailable to researchers in the fields of crime prevention and urban security. This is because, in the social world, the researcher cannot have full control over the conditions under which experiments or tests are conducted. The social world and urban communities especially are continually in a process of change, in which numerous extraneous factors - some of which may be unknown or unknowable - may affect an intervention or its target. The social world is not a laboratory where such external factors can be kept to a minimum. Hence, evaluators have turned to quasi-experimental methods, which are premised upon the investigation of the effects of an intervention **as if it were** an experiment. As the researcher cannot control the social world into which the intervention is inserted, quasi-experimental methods attempt to hold stable, or rule out, as many extraneous factors as possible.

Much of the evidence base, therefore, has been informed by methodologies and an approach that draws on influences from evidence-based medicine and healthcare research. It posits a clear hierarchy of knowledge informed by a ranking of methodologies with randomised controlled trials (RCTs) at its apex - epitomised by the Maryland Scale of Scientific Methods (Sherman 2009) and advocated by the Campbell Collaboration, which has built up a rich evidence base of systematic reviews (which we have drawn on in this report).[1] One of the drawbacks is that this advances a narrow understanding of evidence and science. RCTs strip away the complexities of reality in an effort to isolate certain factors. They embody a linear notion of causality which may be more appropriate in certain fields of medicine but is problematic in the social world, where not only are causes multiple, but feedback loops and interaction effects confound causality.

'Social programmes involve intentional inter action. Differing sub-groups interact with programme components in different ways. Stakeholders, including subjects, adapt over time, meaning not only that the intervention but also responses to it change over time. There is ineluctable complexity as programmes set off chains of action, inter action, feedback and adaptation.'

(Tilley 2009: 138)

[1] See: https://www.campbellcollaboration.org/

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Such contextual factors, however, may be central to a programme's execution, effectiveness and impact. In its narrowing of the frame of relevance, such an approach advances what some commentators have referred to as an 'elite science' (Sparrow 2016), which ignores both the role play by practitioners in giving life to interventions and the knowledge that they bring to the resultant effectiveness of interventions. It also informs a rather unhelpful language and cataloguing of 'what works', as if interventions 'work' free of context.

While RCTs provide strong internal validity, they do not tell us much about whether we could replicate a given intervention in another context. This focus on internal validity also encourages studies of single mechanisms with hypothesised mono-causes as the relationships are easier to determine from social complexity and interdependencies. By contrast, *external validity*, relates to how applicable or transferable the findings are to the real world. It is often these issues of external validity that are of most interest and importance to policy-makers and practitioners, including for example what an intervention actually comprises and the ease with which it can be implemented.

> *'One of the difficulties with how evaluations are reported - in particular how experimental evaluations are reported - and part of the language of evaluation has been to use the term "what works". "What works" is a terrible phrase because it's an unspecified universal. It's "what works… everywhere and at all time". And I rail against the use of that kind of language because built into the phrase "what works" is the unspoken "always and under all conditions". I don't believe there are many, if any, [interventions] where that holds. So, if I could wave my magic wand, I would always have discrete evaluations saying "this worked". Findings of evaluations are always in the past tense. They are always: "this worked here, in this population".'*
>
> Nick Tilley, University College London, Interview

In building the accumulated evidence base that exists today, the quest for methodological rigour and internal validity has often come at the expense of external validity and a more complex understanding of '**what works where, for whom and under what conditions**', as well as a more sophisticated understanding of the dynamics of implementation and context. Given the limitations of RCTs and quasi-experimental designs, greater methodological pluralism is perhaps what is needed for such tasks.

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> *'One of the things that has been happening is that research has become better because we adopted rigorous methods and experiments or quasi-experimental research. But we also lost something with that [focus] and that is looking at what's happening and at the individuals involved. So one thing that might be very interesting is to combine those two. So, on the one hand, we do experimental research and evaluate effects, but at the same time, we follow the people who are carrying out the interventions over time to see what's happening and follow how individuals experience interventions and prevention programmes and what they take from them.'*
>
> Frank Weerman, Erasmus University Rotterdam, Interview

Even in the field of healthcare across the last decade there has been greater debate about what constitutes good evidence and greater questioning of the appropriateness of hierarchies of evidence (Abeysinghe and Parkhurst 2013). For example in the UK, the National Institute for Health and Care Excellence (NICE) issued revised guidelines (NICE 2012) that advocate a more pluralist understanding of 'appropriate evidence'. As Michael Rawlins (a former NICE Chairman) argued: 'The fundamental flaw with the development and use of hierarchies of evidence is that they fail to recognize that it is not the method that matters, but whether the particular method is appropriate to answer the particular question' (2014: 235).

2.4 Utilising the Evidence Base to Inform Actionable Knowledge

One of the problems is that researchers, policy-makers and practitioners are motivated by, interested in, and want, somewhat different things. It may be a caricature, but by-and-large practitioners want to know the practical steps that they should take that will inform and guide their practices: how do we solve this intractable problem? They are less interested in the quality of the evidence that informs this guidance. Policy-makers and administrators tend to want speed, certainty and economy all at the same time. They want solutions today - or preferably yesterday - and they want them to be easy to communicate and implement. They are only interested in hearing from 'one-armed scientists' (Pawson 2013), namely those who can provide unequivocal answers rather than the usual equivocation, caveats, cautions and uncertainty that accompany most research findings that assert 'on the one hand X and on the other hand Y'! Understandably, practitioners and policy-makers are unwilling to settle for 'don't know' as an answer. Researchers are interested in the results of experimentation, learning and accumulated knowledge – all of which take time - almost as an end in itself. Moreover, they tend to be more impressed by acceptance of their findings, its rigour and significance within the peer academic community than its take up, application or use in the wider world.

As Ekblom and Pease suggested many years ago, all those involved in the evaluation and design process 'should move towards the willingness to fail and the readiness to learn from failure' (1995:

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636). However, nearly thirty years on, there remains a pervasive fear of failure, a culture of risk aversion and hence trepidation of genuine experimentation.

There is clearly a greater need for each of the parties to better understand the limitations and constraints of the other parties' motivations, values and priorities. Certainly, the last 30 years have witnesses a greater mutual recognition across these different professional groups often forged through greater partnership working. There remains, however, considerable scope for more such collaborations that engage researchers, practitioners and policy-makers/administrators in the process of mutual learning, knowledge generation, programme co-design and implementation of the kind that the IcARUS project is advancing. This requires a degree of 'boundary crossing' that recognises the differences which structure social worlds and organisational groups, but also the need to work across these in dynamic ways that prompt continual reassessment of assumptions, critical self-reflection and questioning of terminology. Realising organisational change in this context demands building inter-professional relationships of mutual respect, fluid and permeable disciplinary boundaries and the absence of a rigid hierarchy of knowledge forms, as well as a normative concern with action and practical outcomes (Crawford 2020).

The contribution of insights from realist evaluations has been vital, here, in highlighting and advancing our understanding of the interactions between context, mechanisms and configurations of outcome patterns (Pawson and Tilley 1997; Pawson 2002). This provides a framework for thinking about things other than effect size and crucially focuses attention on factors too frequently ignored in the (notably quasi-experimental) research - namely context and implementation, which are frequently central to the concerns of policy-makers and practitioners.

Building upon these realist insights, recent efforts have been given to developing ways to combine discussions of measurement effects and their size together with other dimensions of importance to practitioners and that enable us to assess the quality and applicability of evaluation evidence. One notable example has been the EMMIE scale (Johnson *et al*. 2015; Bowers et *al*. 2017), which seeks to provide evidence that equips policy-makers and practitioners with 'actionable knowledge' (Antonacopoulou 2007) in a format that helps users to access and understand the evidence quickly. It asserts that to provide a framework for learning from interventions evaluations should provide evidence and information on all the following (Johnson *et al*. 2015: 463):

E - the overall **effect** direction and size - alongside significant unintended effects - of an intervention and the confidence that should be placed on that estimate.
M - the **mechanisms** or mediators activated by the intervention, policy or practice in question.
M - the **moderators** or contexts relevant to the production or non-production of intended and significant unintended effects of different sizes.
I - the process of **implementation** that highlights key sources of success and failure in implementing the intervention, policy or practice.
E - the **economic** costs and benefits associated with the intervention, policy or practice.

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Developed in conjunction with the UK College of Policing, the EMMIE framework now informs the What Works Crime Reduction Toolkit,[2] which provides a useful resource for practitioners. In large part, the latter three elements all relate to external validity. However, the trouble remains that most robust research evaluations of crime prevention and security interventions today still (and certainly the vast bulk of those conducted over the last 30 years) do not apply a realist methodology and frequently tell us little, if anything, about factors such as context or implementation, let alone costs. This means that any review of the evaluation literature and certainly any meta-review of reviews (like this) can only provide a partial account as the (scientific) knowledge base largely only focuses on only two of the five elements within the EMMIE framework. As such, the knowledge base shines a light more clearly on the relationship between mechanisms and outcome effects, and is much less revealing about the contexts, implementation or costs of interventions.

2.5 Understanding Mechanisms, Context and Implementation

2.5.1 Risk Factors, Correlations and Causation

Across urban security and the four focus areas there has been a concerted focus on identifying risk and protective factors – predominantly at an individual level, but also at group or community level. This has been informed significantly by 'developmental criminology' (Loeber and LeBlanc 1990; LeBlanc and Loeber 1998), the policy and practice implications of which have been defined, by one key proponent, as 'risk-focused prevention' (Farrington 2007). The focus, here, is on a combination of: first, identifying and categorising distinct risk factors; and secondly, understanding developments, patterns and trajectories across time.

With regard to the former, a *risk factor* is commonly understood as a 'predictor'; namely a factor or variable that is statistically significantly associated with and precedes the outcome (i.e. prevention). A *prediction,* therefore, is a forecast of an *outcome* based on a regularly occurring association between a predictor and the outcome. Prediction is not the same as causation. It may only be one possible element in establishing causation. Most risk factors are markers and symptoms that are correlated to causes but are not causes in themselves. While causation and correlation can exist at the same time, correlation does not imply causation. Causation explicitly applies to cases where action X causes outcome Y. On the other hand, **correlation is simply a relationship or conjunction between two factors.** Action X relates to Action Y — but one event or factor does not necessarily cause the other event to happen or factor to express itself.

To distinguish between 'causes' and 'predictors', as Wikström (2020: 190) notes, we need also to identify 'a plausible process that connects the putative cause and the effect and that produces the effect'. Hence, we need a strong and credible argument for how and why the assumed cause would produce the effect in question. These are what realists refer to as the causal mechanisms in an intervention. This has important implication for evaluations and for their methodological design. If

[2] See https://whatworks.college.police.uk/toolkit/Pages/About_the_CRT.aspx

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success is defined in terms of conjunction between two factors, it may not tell us about causes. Prevention, by its nature, presupposes preventing causation or at least preventing its escalation and any subsequent developmental trajectory.

> Paul Ekblom notes, one of the key developments across time has been:
>
> *'The shift from rather superficial "what works" or "constant conjunction" evaluation designs, which simply registered the presence or absence of a successful crime preventive effect, to one where the causal mechanisms conjectured to underlie those effects (or their absence) are investigated.'*
>
> Paul Ekblom, University of the Arts London, Interview

One major gap in the knowledge base is in our understanding of how individual causal factors for crime and urban security interventions interact with one another. There is a common assumption that the more risk factors a person or place displays – i.e. the notion of 'cumulative risk' - the more likely they are to also to display the outcome; namely crime, criminal involvement or insecurity. However, better prediction does not necessarily equate with stronger causation. Cumulative risk does not itself equal cumulative causation. Research is only beginning to explore the interaction effects between different causal influences, in recognition that the forces driving crime and insecurity are multi-layered and interdependent.

Ultimately, urban security issues are 'wicked problems' (Rittel and Webber 1973) *par excellence;* they are difficult (or impossible) to solve due to incomplete or contradictory knowledge, have innumerable causes, do not necessarily have a right answer - they entail normative judgements about justice, fairness, liberty and equality - and are the subject of fragmentation under the contemporary division of professional labour whereby information and knowledge are chaotic and scattered.

The growing literature on 'critical realism' (Pawson and Tilley 1997; Pawson 2013) and 'implementation science' (Greenhalgh 2018) and have helped expose the relative weakness of the evidence base across public policy domains with regard to the two thorny issues of context and implementation. The challenge has shifted away from the quest for universal truths about knowing 'what works' and more about better understanding the context, constraints and conditions under which interventions are implemented and in which desired outcomes are realised. Allied to this is the question of who benefits, which groups/people from the intervention in a particular place/situation at a specific time. This bring into focus questions about processes of implementation themselves and better understanding how they inform or determine outcomes, on the basis of how an intervention is implemented. This concerns not simply the degree to which a measure is implemented or the dosage of the measure that is delivered but also the organisational, cultural

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and social conditions, processes and relations that supported or obstructed delivery of the intervention.

2.5.2 Context

Context is central to any causal explanations. From a realist perspective, the mechanisms through which social programmes work will only operate if certain contextual circumstances are present (Pawson and Tilley 1997). It seeks to mediate between, on the one hand, a positivist approach that holds that context is a source of bias to be eliminated from evaluations (i.e. RCTs) in the search for 'context-free' laws and generalizable principles or norms and, on the other hand, a constructivist account which holds that context is everything and that every context is unique. Realism argues that context can be considered as the route to middle-range causal explanations. Following Boudon (2014), while it is not possible to make generalisations about what constitutes 'context' in isolation, it is possible to form generalizable, middle range causal explanations about the ways in which contexts interact with mechanisms to produce outcomes.

> *'What I mean by context is: the conditions which are significant for the activation of causal mechanisms. Those might have to do with gender, they might have to do with ethnicity, they might have to do with class, and they might have to do with age, but they don't necessarily have to do with any or all of those. So the trick with understanding context is to understand what are the salient features of the conditions in which an intervention takes place, which lead to the activation of one set of mechanisms rather than another. I'm not sure that those things can always be pre-specified.'*
>
> Nick Tilley, University College London, Interview

Given that 'context' can mean 'absolutelybloodyeverything' (Pawson cited in Manzano and Greenhalgh 2021: 10) – we need to think about how context can be strategically operationalised in useful ways for the purpose of this *Review*. Manzano and Greenhalgh (2021) provide a systematic review of how context has been applied in a wide range of realist synthesis and evaluations. They highlight how context has been very broadly and not always helpfully deployed, even in realist research. They identified two key context 'narratives'. The first, conceptualises context as 'tangible, fixed, observable features that trigger mechanisms', while the second, conceptualises context as 'relational and dynamic features that shape the mechanisms through which the intervention works' (Manzano and Greenhalgh 2021: 2).

1. **Context as 'observable feature' or 'things'.** Here there is a tendency to define context as features that 'triggered', 'enabled' 'supported' or 'facilitated' the intervention or that 'blocked' or acted as 'barriers' to the intervention. These were often defined as 'things': 'This approach to context lends itself to the idea that one can identify and then reproduce these contextual

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features in order to optimise the implementation of the intervention as intended' (Manzano and Greenhalgh (2021: 4).

2. **Context as 'relational and dynamic' features or 'forces/interactions'**. Here context is no longer conceived as a 'thing' but more as the underlying features that are relational and dynamic. Context shapes the mechanisms through which the intervention works. Hence, context is conceptualised not in terms of what it ***is*** but in terms of what it ***does***.

Following Pawson (2013: 37) these 'different layers of context' can be classified as the '4 Is' of individuals, interpersonal relationships, institutional settings and infrastructure:

Individuals*:* The various individuals involved in carrying out the programme and their personal characteristics and capabilities.

Interpersonal relationships*:* The relationships between the individuals involved in carrying out the programme.

Institutional setting*:* The rules, norms and values of the setting into which the programme is introduced.

Infrastructure: The wider cultural, social and economic aspects of the setting into which the programme is introduced.

Important here are not just the various layers, but also the ways in which they interact.

> *'It is important to differentiate between different types of context rather than treating the concept as an amorphous whole… Each of these contexts can contribute to success or failure.'*
>
> Paul Ekblom, University of the Arts London, Interview

This is helpful in differentiating between what Ekblom (2004) refers to as the 'implementation context', which includes the observable features of 'institutional setting and infrastructure' through which mechanisms must pass (often being translated, distorted or refashioned in the process) as they are implemented, as distinct from other features of context. These other layers of context include the relationships and dynamics that arise from the interactions between 'actors' (and the institutional arrangements in which they are organised and work) and 'targets' the people/places subject to the intervention their 'reception', 'reactance' and 'response'. Often this takes the form of relations between *service providers* and *service users*. Added to this mix are the interactions and dynamics among targeted service users themselves (both the people and places as they develop across time). These are more clearly the dynamic forces that are what Coldwell (2019) calls the 'underlying features' of context.

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2.5.3 Implementation

Implementation is the deliberate initiation of activity that is consciously planned and intended to lead to a changed outcome in line with the designs of an intervention (May *et al*. 2016: 3). For some, the implementation process is seen as incorporated within the broad parameters of context. For our purposes, however, it is useful to differentiate between the layers of context discussed above and implementation as a distinct feature of urban security interventions. Damschroder *et al*. (2009: 5) highlight a similar approach in defining 'inner' and 'outer' contexts whereby: *'Generally, the outer setting includes the economic, political, and social context within which an organisation resides, and the inner setting includes features of structural, political, and cultural contexts through which the implementation process will proceed.'* As a process, implementation works through, and within the constraints of, these wider underlying features of context. Implementation refers to what Nick Tilley (Interview) describes as the 'doability' of an intervention rather than the intervention's effects.

> *'There's an implementation space that is separate from context, as Ray [Pawson] and I wrote about it. But I don't think that the distinction is crystal clear. I think there is some fuzziness between them. So, when we try to do EMMIE informed reviews of suites of interventions in relation to particular measures, getting those things sorted out is quite difficult.'*
>
> Nick Tilley, University College London, Interview

Traditionally, policy implementation has tended to be conceived as a 'top-down' process conceptualised as entailing 'stages' (Rose 1973) or in terms of 'streams' (Kingdon 1984) or as a ubiquitous 'cycle' construct of five main tasks of policy-making: from agenda-setting and policy formulation through decision-making to policy implementation and evaluation (Anderson 1975), although these are rightly criticised as being overly linear, rationalistic and technocratic. They also tended to say less about implementation and evaluation - seen as downstream, less important and more likely to take care of itself. Early studies focused on what policy implementation looked like **from above** and the barriers to the realisation of the expectations and intentions (Pressman and Wildavsky 1984) of 'principals' - those who make the policy - rather than what it looked like from the perspective of 'agents' - the implementers or as Lipsky (1980) famously called them, the 'street level bureaucrats'.

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> *'Too often social analysts offer generalizations about organisational and governmental actions without concretely explaining how individual citizens and workers are affected by the actions, how the behaviour of the individuals, when aggregated, gives rise to the actions, or how and why the actions in question are consistently reproduced by the behaviour of individuals.'*
>
> Lipsky (1980: xi)

The multiple streams framework (drawing on Kingdon) has tended to focus less on policy task and more on the interactive behaviour of several sets of actors pursing particular visions of policy problems and solutions or the politics surrounding them. In Kingdon's model, three quasi- or semi-independent 'streams' of political, problems and policy (solutions) events and activities periodically flow together across realms. The streams model stresses the constant complexity of agenda-setting behaviour, its occasional chaos and sometimes highly contingent nature, facets that tend to get lost in the 'cycle' approach. However, much attention has been given to the agenda setting and policy formation processes rather than with implementation itself.

What the review of research highlights is that attempts to understand the dynamics of implementation and to evaluate their effects are limited. They tend to be either front-loaded into quasi-experimental designs in the form of programme theories that specify their expected mode of operation and outcomes or explored in retrospective 'process evaluations' of activity over time and any possible effects of this implementation action on measured outcomes (May *et al*. 2016). This means that our understanding of implementation theory and empirical research are heavily skewed towards the beginnings of the implementation journey.

2.6 Understanding the Relation between Evidence, Policy and Practice

Writing over twenty years ago Visher and Weisburd (1998: 238) asserted: 'crime prevention today as in the past has a tendency to be driven more by rhetoric than reality', while, at much the same time, Sherman (1998: 6) argued that most law enforcement and police practice 'is still shaped by local custom, opinions, theories and subjective impressions'. This was certainly true across much of Europe at the time. As the IcARUS *Review* reveals, over the last 30 years or so the knowledge base has expanded significantly and become both more robust and rigorous. There is a rich basis of experimentation and learning upon which we can now draw and the institutional infrastructure for delivering integrated urban security has advanced considerably. The application of the knowledge base in national and municipal policies and professional practice, however, remains patchy and continues to be shaped by considerations other than the accumulated knowledge and learning about effective interventions, processes that inform and their implementation.

It is not that the science is uniformly poor or ill-developed with regard to crime prevention and urban security – although it is inevitably incomplete and shifting in the light of technological and

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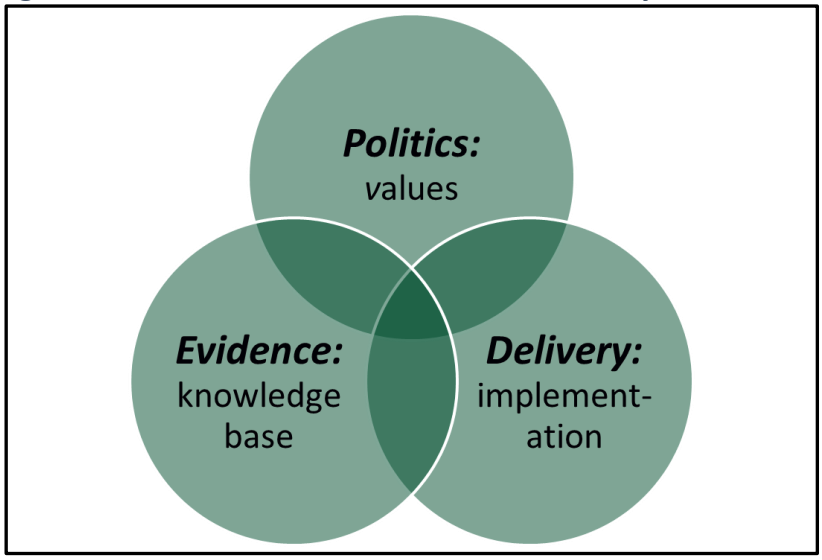
social change, while there also remain significant knowledge gaps. Rather, too often it is not being implemented or implemented in inappropriate ways and/or circumstances. As Irvin Waller (2019) powerfully argues, it is this implementation failure that constitute the most basic contemporary challenge: *'We are left wondering why we cannot implement measures that we know will work, reduce crime, and cost less for law and order'.*

Figure 2.1: The Relation between Evidence, Policy and Practice



We should not be surprised, therefore, that urban security, like other fields of public policy and professional practice, is frequently driven by factors other than the accumulated evidence-base, including politics, institutional cultures, social values and personal preferences. Even where there is agreement on the 'evidence' – regardless whatever domain of public policy - there remain important questions about social values and deliverability, as responses to Covid-19 have well-illustrated. In the field of urban security, where public sensibilities inform deliberations about crime, harm and victimisation and where prominent events and incidents can cloud debates, these introduce into the translation of research into policies and practices messier and more complex dimensions.

This process of translation, application or (conversely) disregard entails an interplay (or clash) between three very different influences and considerations: *politics* (namely values); *evidence* (the knowledge base); and *delivery* (or implementation) – see Figure 2.B. Policy-makers and practitioners make decisions in environments where they are subject to various, often competing, pressures, influences and priorities. 'Evidence' is only one (often contested) element in this complex mix (Nutley *et al*. 2007). Urban security is a normative enterprise – governed by key principles of respect for individual rights, due process and equal treatment and the balance between safety and other social values – and, hence, intrinsically political. Engaging with the political and normative dimensions of urban security – whether we like it or not - demands consideration of social value

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judgements; with 'the ethical principles, preferences, culture and aspirations of society' (Rawlins 2014: 233). Hence, evidence alone is insufficient.

In this context, evidence can be subsumed by, or deployed in the service of, political programmes or ideologies – this is sometimes referred to '*policy-based evidence*' making (Mythen *et al*. 2017) in contrast to 'evidence-based policy'. Even where policies do align with and advance the evidence base, there still remain questions over delivery and the degree to which policies are implemented on the ground. The term 'programme integrity' is commonly used to describe the degree to which interventions are delivered according to their design and/or underpinning principles (Helmond *et al*. 2014).

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3 Preventing Juvenile Delinquency

In this Section, we begin by defining the terms 'preventing juvenile delinquency', so as to clarify our scope of analysis and its parameters, given the contested and expansive nature of the concepts involved. We go on to present a general assessment of how the study and prevention of juvenile delinquency has evolved over the last 30 years, before introducing our research questions, data collection processes and salient findings.

3.1.1 Definition of Focus Area

Over the years, valuable progress has been made within juvenile delinquency, with a more well-rounded understanding of the criminality of youths being explored and important innovations and progress considered and evaluated. Juvenile Delinquency represents a field with specific challenges, as many countries, cultures and regions around the world define the concept of *juvenile* or *youth* differently. Within this *Review,* we are not seeking to provide a universal definition of juvenile delinquency, but instead refer to the definitions that are offered on a research or national basis. This has a result of including a wide range of ages (anywhere from infancy to early-20s), but generally most definitions are within the legal definition of a juvenile, which often span from a young age to when an individual reaches an age of maturity. This framework often reflects an assumed knowledge or understanding by which a culture understands a shift from juvenile to adult. These inherent cultural and legal differences concerning juvenile delinquency is part of what makes it so challenging to examine juvenile delinquency prevention on a global scale. Even within the European Union, each nation differs in how they define and deploy the concept of 'juvenile'.

The use of the term *delinquency* poses a similar challenge, in that it can refer to diverse acts and behaviours ranging from antisocial and deviant to criminal. Here again, we did not specifically define the term, but instead included deviancy as used within research and on a national basis. The exception was the exclusion of any serious types of criminal acts of behaviours. For our purposes, the definition used for this focus area was both broad but also sought to delimit certain parameters.

Preventing Juvenile Delinquency

Proactive or deliberate interventions that seek to prevent or reduce harm that arises from the consequence of juvenile offending and antisocial behaviour. Focus will be targeted on early interventions in the environment and life of children and young people at risk of offending or in the developmental trajectory of behavioural problems. This will include early interventions before and at the onset of minor criminal or antisocial behaviour. It will mainly focus on developmental prevention and the pathways into and out of crime for children and young people aged under 18.

3.2 Overview of Literature

Juvenile delinquency has been at the forefront of public attention since the conception of criminology and the criminal justice system. Throughout that time, there have been prominent trends and theories regarding the underlying causes and prevention for youthful deviance. While

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the focus of this *Review* examines juvenile delinquency prevention in terms of the nature of developments and the accumulated knowledge over the last 30 years (1990-2021), it is important to recognise some major shifts in understanding, which took place in the decades prior to the 1990s.

Traditionally, rehabilitation or correctional approaches were the dominating method by which juvenile delinquency was approached (Howell 2008). Some of the earliest prevention-specific work which took place included the Chicago Area Project (1932) and the Cambridge Somerville Youth study (1937), which were two longitudinal studies focusing on preventing juvenile delinquency at a community level (Mays and Winfree 2000). These studies sought to provide additional community resources specifically targeting possibly delinquent youths, and included resources such as recreational programmes, and additional health and educational resources. The Cambridge Somerville Youth study additionally provided counseling and therapy services to families. This represented some of the earliest work, which focused on specifically prevention, rather than a correctional approach, while also considering the effects early prevention measures might have on a long-term basis.

An important framing of juvenile delinquency, and indeed the field of criminology, is the 'age crime curve'; first introduced in the 1830s and has since become a defining characteristic of how we understand criminality across the developmental lifecourse (Matthews and Minton 2018). The age crime curve highlights that criminal offending peaks and is most prevalent during mid to late adolescence. Hence, the incidence of crime increases with age until individuals reach about 16 to 20 after which the incidence of crime then decreases with age in adulthood. This suggests that a certain level of crime is a 'normal' part of youth development and that young people generally 'grow out of crime' (Rutherford 1992).

The 1970s and 1980s saw the beginnings of a greater preventive turn in juvenile delinquency - as a distinct field of research and practice. Rather than concentrating solely on policing, prosection and correctional institutions, the focus began to explore and consider preventive measures and the possible underlying criminogenic factors for delinquent behaviour. In light of the 'nothing works' pessimism that followed Martinson's (1974) infamous 'What Works' review of rehabilitation and correctional interventions, greater store was placed on seeking to prevent offending before it occurred rather that seeking to correct offending behavior once it had set in. This prompted greater emphasis on the onset of offending, a quest to identify risk and protective factors and investment in developmental prevention programmes.

This shift allowed for research to consider the role early childhood may have upon future criminal behaviour, as well as targeting specific risk factors. In turn, it also paved the way for risk-based preventive interventions that have become prevalent in various criminal justice systems across the world, as well as the further progression of developmental types of prevention. Developmental prevention targets the early life stages and consequently, the developmental phases of a child's life. Throughout the 1990s, research explored various developmental programmes, studies and

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initiatives, which often involved a heavy focus on family interaction and parenting skills. At the same time, and perhaps informed by this new area of research, consideration for multi-risk factored programmes and initiatives also started to gain traction. This included the trend of moving from a 'one-size-fits-all' approach to a more catered approach, which incorporated contextual aspects of communities such as socio-economic status. The introduction of diversion programmes that seek to divert youths from entering the formal criminal justice system (including incarceration), also grew in popularity and have become a staple within criminal justice systems around the world.

North American literature and perspectives significantly influence the above overview. The volume of research and literature concerning juvenile delinquency from North American institutes and researchers historically and currently dominates the field, though additionally literature from the UK and Ireland provided important contributions. We hoped to include more international research concerning this subject, but unfortunately found a lack of accessible literature (typically referring to translated articles), partly as a result of the English language bias. Therefore, this overview represents our best understanding of the field of preventing juvenile delinquency with the available resources.

As we demonstrate in the following section, the current state of juvenile delinquency prevention pales in comparison to the wealth of resources concerning youth rehabilitation and recidivism research and knowledge. The current knowledge base of juvenile delinquency demonstrates a need for greater research of a high quality to provide useful understanding and tools to be used within communities on a global scale. While this focus area represents an expansive and encompassing area of study, and while we seek to provide an overview of relevant trends, practices and innovations, this *Review* cannot cover the entirety of the research, programmes and initiatives intended to prevent juvenile delinquency. We have narrowed our focus to include the most relevant areas for the purposes of the IcARUS project. In this section, we discuss our findings, and provide a context for understanding the current state of preventing juvenile delinquency.

3.2.1 Research Questions

The primary aim in this section is to determine and disseminate the current state of preventing juvenile delinquency. In the process, we aim to provide insight into additional aspects of preventing juvenile delinquency. We begin by outlining the initial research questions.

1. What do we know about the effectiveness of prevention initiatives or programmes at the municipal level in the field of juvenile delinquency and how has this changed over the last 30 years?
2. What do we know about the importance of context and implementation in shaping the effectiveness of interventions to prevent juvenile delinquency?
3. What knowledge gaps and which institutional barriers persist in relation to preventing juvenile delinquency?

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4. What lessons can be learnt from the accumulated knowledge base that should inform future innovative approaches to preventing juvenile delinquency?

Prevention Types

To contextalise the *Review* findings, it is helpful to outline the threefold typology of prevention drawn from the field of healthcare that has informed modern crime prevention thinking: namely primary, secondary and tertiary prevention. Initially introduced to criminology by Brantingham and Faust (1976), these terms have now become standard frames of reference within crime prevention theory (Crawford 1998; Howell 2008). They focus on the targets of preventive interventions and, in turn, determine the intended audience and the range and scope of prevention measures. Hence, primary prevention is aimed at a general population about whom no assumptions as to their criminality are presupposed. Secondary prevention, on the other hand assumes the audience to be 'at risk' in some way or other, while tertiary prevention is focused upon foreshortening, reducing or limiting the criminality of those already presupposed to be criminal.

Primary prevention refers to prevention measures that seek to eliminate or counteract issues before they can excel to more serious issues or actions. Typically, this might include general welfare-based initiatives, which may involve building strong social and community bonds or educational programmes that support pro-social values of compliance. Examples include parenting programmes and family-based interventions, preschool programmes, behavioural, skills training, peer programmes, community programmes and situational programmes.

Secondary prevention refers to prevention measures that are targeting individuals 'at-risk' or at increased risk of engaging in deviant behaviour. Examples include family-based interventions, community-based interventions, mentoring, therapeutic interventions, antisocial behaviour and skills training.

Tertiary prevention refers to prevention measures that target those who have already exhibited or engaged in criminal actions or behaviour. This includes interventions to reduce the incident, occurence or impact of offending. Often provided by criminal justice institutions, tertiary prevention initiatives tend to fall withing the realm of rehabilitation and the reduction of recidivism. Examples include diversion programmes, juvenile justice related prevention programmes or probation-based interventions.

When considering how prevention might be implemented, these three typologies help researchers, practitioners and the wider community to target and understand better the types of crime prevention initiatives that may be taking place.

The implementation of any programme requires the size of population or targeted audience to be identified and include: *universal (general)*; *selective (targeted)*; *and indicated (individual).* Here again, criminology has sought to use a public health model to understand the different levels by which crime prevention measures or programmes might be implemented (Howell 2008). This proves to be a particularly relevant comparison in light of the current climate of the ongoing global pandemic, as these terms can be best understood through a comparison of public health protocols

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concerning the spreading of a virus. The *universa*l level includes public heath campaigns (washing hands, use of antibacterial solution, vaccines, etc.) which targeted everyone, while selected (or targeted) types of prevention seek to target those who are showing symptoms, or are higher risk of getting sick and include measures such as wearing a facemask, or staying home if feeling unwell. Indicated (or individual) measures target those who were already infected, and are less prevention focused and instead focus on responding to the threat or complication at hand. This includes treatment and recovery, as well as measure to ensure those who were infected did not get re-infected or directly spread the illness. In relation to crime prevention, this is demonstrated through universal programmes implemented on a community-wide level. Selected programmes on the other hand, target at-risk youth, and indicated interventions seek to provide support for youths already engaged in antisocial, deviant, or criminal activity. This public health comparison to criminality is a common one, which has influenced the consideration of crime and violent behaviour as public health issues rather than purely criminal ones.

For the purposes of this *Review,* the focus is on **primary** and **secondary** prevention, rather than reactive – criminal justice - interventions associated with tertiary prevention. Having now defined and discussed relevant terminology, we now examine the current state of knowledge pertaining to preventing juvenile delinquency.

3.3 Typology of Interventions

The primary aim of the *Review* is to consider the mechanisms, context, implementation and effectiveness of interventions regarding primary and secondary prevention programmes (see below) over the last 30 years. A full breakdown of our methods that informed the data collection for the *Review* of this focus area can be found the *Methodology and Data Collection* (Section 9). It provides a more detailed explanation of how the search and analysis of the review of juvenile delinquency was conducted. A brief overview of the inclusion criteria included documents available in English, where a review (systematic, scoping, mini, etc.) discussed a crime prevention intervention or mechanism and was published within our year range of 1 January 1990 and 30 June 2021. As we required documents to be available in English, this resulted in much of the included literature deriving from North American and Western Europe. There is also an acknowledged bias in the field of juvenile delinquency research with North American and UK institutions and organisations dominating available literature, and which is prevalent in our own findings (Stevens *et al*. 2006).

The 62 reviews which were identified from our literature search represents a broad spectrum of programmes, initiatives and interventions across the field of juvenile delinquency. We have established that our focus lies in prevention-focused initiatives, resulting in the exclusion of tertiary type programmes, which often include more interaction and processing with the respective juvenile justice system. Within this section, we first expand upon primary and secondary types of prevention, as well as the different engagement levels, which consist of universal, selective and indicative types. This is followed by a presentation of our findings, including a categorisation of types of preventative measures, and relevant characteristics.

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While we discussed our inclusion and exclusion criteria in another section, it is relevant to our findings to address the issue of risk assessments. It is common to encounter a multitude of behavioural risk assessments, which aim to determine possible behaviour or contextual risks that indicates a higher likelihood to engage in criminal activity or a criminal lifestyle. These risk assessments are a popular method to help practitioners and researchers alike target at-risk youths for preventive resources and programmes. A majority of the literature found in the initial search for this review were related to risk assessments. While risk assessments can be useful tools they are often simply provided as a form of assessment and do not provide a prevention strategy or follow-up procedures. Additionally, there is no standardised or universally accepted criteria for risk assessments, meaning that there are high volumes of competing assessments for numerous types of crimes, populations and contexts. Further research is needed to even determine the effectiveness or quality of risk assessments, as they more often prove correlation of risk and behaviour but lack the ability to fully demonstrate causation. This distinction is highly relevant for the purposes of this *Review*, as it helps to explain the apparent lack of literature that specifically measures or examines prevention programmes for juveniles and are discussed further in relation to multi-risk factored prevention programmes at a later point.

3.3.1 Programme Characteristics

The 62 articles that constitute the final number of reviews matching our inclusion criteria span 26 years, with the first review being published in 1994 and the most recent review having been published in the first half of 2021. These findings include a wide range of interventions which target numerous antisocial and deviant behaviours. After considering the final number of studies, we have established four broad categories of juvenile delinquent behaviour and use these categories as a means to helpfully interpret and analyse our findings. We must stress that these are broad categories and were determined by the overall focus of the literature. Given the scope of this project, these categories presented the most efficient way in which to discuss our findings.

The categories are: addiction; antisocial behaviour; violence; and multi-risk factored programmes. These four programmes represent the most common types of interventions that were evident in the findings, but also cover some of the more prominent categories of prevention programmes typically used in relation to juvenile delinquency. Each of these categories are discussed in turn, with particular regard to the context, implementation, outcomes and ultimately the effectiveness of the interventions. It should be noted that while juvenile delinquency inherently represents more than these simplified categories, we had to provide some type of meaningful structure to our findings in order to provide any useful type of analysis.

3.3.2 Addiction (13 Articles)

General Findings/description of data

Addiction-specific literature was a prevalent area of focus for juvenile delinquency curriculums and interventions, with a total of 13 articles between 2004 and 2020 being identified in this *Review.* This

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literature includes a wide range of prevention levels, socioeconomic populations and research methods. In comparison to the other three focus areas within juvenile delinquency, the addiction focus represents the area with the most diverse types of programmes or interventions (see Table 3.1).

Table 3.1: Articles on Addiction

	Authors	Title	*N*=
1	Agabio *et al*. (2015)	*A Systematic Review of School-Based Alcohol and Other Drug Prevention Programmes	12
2	Allen *et al*. (2015)	Using Mass Media Campaigns to Reduce Youth Tobacco Use: A Review	34
3	Carney *et al*. (2016)	Brief School-Based Interventions and Behavioural Outcomes for Substance-Using Adolescents	6
4	Geir *et al*. (2017)	Effects of early, computerized brief interventions on risky alcohol use and cannabis use among young people	60
5	Healey *et al*. (2014)	Underage Drinking in the UK: Changing Trends, Impact, and Interventions. A Rapid Evidence Synthesis	7
6	Hefler *et al*. (2017)	*Incentives for Preventing Smoking in Children and Adolescents	8
7	Kourgiantakis *et al*. (2016)	*Parent Problem Gambling: A Systematic Review of Prevention Programmes for Children	16
8	Kumpfer *et al*. (2008)	A Wakeup Call to The Prevention Field: Are Prevention Programmes for Substance Use Effective for Girls?	NA
9	Liddle (2004)	Family-Based Therapies for Adolescent Alcohol and Drug Use: Research Contributions and Future Research Needs	NA
10	Magalhães *et al*. (2020)	*A Systematic Review of Community Prevention Studies Empowering Parents as Vectors of Prevention	12
11	Roe and Becker (2005)	Drug Prevention with Vulnerable Young People: A Review	16
12	Usher *et al*. (2015)	A Realist Review of Family-Based Interventions for Children of Substance Abusing Parents	32
13	Vermeulen-Smit *et al*. (2015)	The Effectiveness of Family Interventions in Preventing Adolescent Illicit Drug Use: A Systematic Review and Meta-Analysis of Randomized Controlled Trials	39

** Studies that explicitly indicated either multiple countries were included in their review and/or were non-North American in nature.*

The literature here discusses highly specific types of interventions as well as mass media campaigns, which may be a result of the various types of addictive behaviour that is targeted. This is evident in Table 3.2 (below), which demonstrates a fairly balanced spread of literature across various prevention levels and focus. This table helps to organise our findings in a way which indicates the relevant level and target each article discusses. As there were a number of reviews which included an analysis of multiple levels or targets, we have also included a 'mix' subcategory, so as to distinguish these from those articles which had a narrower focus. Those which considered multiple

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prevention levels with multiple types of targets were the most prevalent, with a scattering of the remaining four falling within universal school focused, selective school focused, targeted family focused and universal community focused. The addiction focused prevention programmes included in this review demonstrates a wide range of types of addiction, ranging from alcohol, tobacco, drugs and gambling. The resulting analysis cannot provide in-depth analysis of effective procedures as these types of addictions can range from simply antisocial to criminal behaviour, and do not provide a consistent crime type. What is evident from our findings is the viable elements from many of the programmes discussed in this *Review*, though few provide a complete programme or curriculum to deliver to specific population/prevention levels.

Results

Overall, there seems to be a number of reasonably effective addiction focused prevention programmes which target juveniles. All three levels of universal, selected and indicated prevention demonstrated at least one successful programme, and all three delivery types (school, family and community) also demonstrating successful programmes.

Table 3.2: Addiction Focused Prevention Programmes (13)

	School	Home/Family	Community	Mix
Universal	Agabio 2015 (Y) Helfer 2016 (ID)		Allen 2015 (Y) Magalhaes 2020 (NR)	Kourgiantakis 2016 (NR)
Selected	Carney 2015 (ID)	Liddle 2004 (Y) Usher 2015 (NA)		
Indicated			Smedslung 2017 (Y)	Roe 2005 (NA) Healey 2014 (N)
All/Mix		Vermeulen 2015 (M)		Kumpfer 2008 (M)

Y = Successful; N = Unsuccessful; NA = Not determined; NR = Not relevant; ID = Insufficient Data
M = Mixed Results

Almost every article within this category underlined the need for further research into specific socioeconomic contexts and populations (specifically research which focuses on gender-specific or gender-universal programmes as current research either didn't indicated gender differences, or typically targeted only boys). Unfortunately, because of the diversity of addiction type (specifically various drug types and levels of harm), it seems these programmes attempt to cover a lot of ground in a short amount of time. There was a noticeable lack of literature considering the movement to legalise marijuana, which has progressed in many countries. While much of this literature is from a North American perspective, the ongoing international debate concerning legalisation of certain drugs was not addressed in any meaningful way in the literature.

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3.3.3 Antisocial (29 Articles)

General Findings/description of data

This area represents the largest collection of findings, as a result of antisocial behaviour representing a multitude of non-favourable actions or behaviours. The term antisocial is used loosely here, and can often refer to numerous behaviours, including those which are addressed in the other three categories (violence, addiction and multi-factored). The majority of studies here are from a North American context, or included multiple countries included.

In some respects, the antisocial and multi-risk factored programmes may seem to overlap in regard to focus, but the literature and data represented in the multi-risk factored section self-identify as such, while the literature within the antisocial section refer specifically to behaviour which is deemed as antisocial (see Table 3.3).

Table 3.3: Articles on Antisocial Behaviour

	Authors	Title	N=
1	Alperin *et al*. (2021)	School-Based Interventions for Middle School Students with Disruptive Behaviors	51
2	Barlow *et al*. (2016)	*Group-Based Parent Training Programmes for Improving Emotional and Behavioural Adjustment in Young Children	24
3	Barnes *et al*. (2014)	School-Based Cognitive-Behavioral Interventions in the Treatment of Aggression in the United States: A Meta-Analysis	25
4	Brännström *et al.* (2016)	*Aggression Replacement Training (Art) For Reducing Antisocial Behavior In Adolescents and Adults: A Systematic Review	16
5	Burkey *et al*. (2018)	*Psychosocial Interventions for Disruptive Behaviour Problems in Children in Low- And Middle-Income Countries: A Systematic Review and Meta-Analysis	26
6	Curran and Wexler (2017)	School-Based Positive Youth Development: A Systematic Review of The Literature	24
7	Dretzke *et al*. (2005)	*The effectiveness and cost-effectiveness of parent training/education programmes for the treatment of conduct disorder, including oppositionaldefiant disorder, in children	32
8	Drummond *et al*. (2002)	Home Visitation Programmes for At-Risk Young Families - A Systematic Literature Review	14
9	Fagan and Benedini (2016)	How Do Family-Focused Prevention Programmes Work?	26
10	Ferguson *et al*. (2007)	The Effectiveness of School-Based Anti-Bullying Programmes	42
11	Gardner *et al*. (2016)	*Transporting Evidence-Based Parenting Programmes for Child Problem Behavior (Age 3-10) Between Countries	17
12	Goense *et al*. (2016)	Making 'What Works' Work: A Meta-Analytic Study of The Effect of Treatment Integrity on Outcomes of Evidence-Based Interventions for Juveniles with Antisocial Behavior	14

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13	Grove *et al*. (2008)	A meta-analytic examination of follow-up studies of programmes designed to prevent the primary symptoms of oppositional defiant and conduct disorders	45
14	Hendriks *et al*. (2018)	Childhood Aggression: A Synthesis of Reviews and Meta-Analyses to Reveal Patterns and Opportunities for Prevention and Intervention Strategies	72
15	Lösel and Beelmann (2003)	*Effects of Child Skills Training in Preventing Antisocial Behavior: A Systematic Review of Randomized Evaluations	135
16	Lundahl *et al*. (2006)	A Meta-Analysis of Parent Training: Moderators and Follow-Up Effects	63
17	Maynard *et al*. (2012)	Indicated Truancy Interventions: Effects on School Attendance among Chronic Truant Students	28
18	Mejia *et al*. (2012)	A Review of Parenting Programmes in Developing Countries	44
19	Menting *et al*. (2013)	Effectiveness of The Incredible Years Parent Training to Modify Disruptive and Prosocial Child Behavior: A Meta-Analytic Review	50
20	Michelson *et al*. (2013)	*Do Evidence-Based Interventions Work When Tested in the 'Real World?'	28
21	Murano *et al*. (2020)	A Meta-Analytic Review of Preschool Social and Emotional Learning Interventions	NA
22	Nixon (2002)	Treatment of Behavior Problems in Preschoolers: A Review of Parent Training Programmes	NA
23	Petrosino *et al*. (2013)	'Scared Straight' and Other Juvenile Awareness Programmes for Preventing Juvenile Delinquency	9
24	Sawyer *et al*. (2015)	Long-Term Effects of Prevention and Treatment on Youth Antisocial Behavior: A Meta-Analysis	66
25	Terzian and Fraser (2005)	Preventing Aggressive Behavior and Drug Use in Elementary School: Six Family-Oriented Programmes	6
26	van der Pol *et al*. (2017)	*Research Review: The Effectiveness of Multidimensional Family Therapy in Treating Adolescents with Multiple Behavior Problems-A Meta-Analysis	19
27	Wilson *et al*. (2016)	*Juvenile curfews are not effective in reducing crime and victimization	12
28	Yoshikawa (1995)	Long-Term Effects of Early Childhood Programmes on Social Outcomes and Delinquency	40
29	Yoshikawa (1994)	Prevention as Cumulative Protection - Effects of Early Family Support and Education on Chronic Delinquency and Its Risks	4

** Studies that explicitly indicated either multiple countries were included in their review and/or were non-North American in nature.*

Results

As can be seen from Table 3.4, the majority of antisocial behaviour programmes are family-based, though the most prominent level of this are programmes targeting at-risk (selected) youths (on a general level these were typically target boys, or a mix unless specifically indicated). Additionally, at

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least five of those findings use a mixed delivery level within a family-based programme and represent some of the more up-to-date literature in their findings. Much of this literature also focuses on a developmental approach to antisocial behaviours and focuses on younger children. Out of the 29 articles identified as having an antisocial focus, only three articles were school based, eight were parenting-specific programmes, four were family-based, one skills-based, one was cognitive behaviour therapy, three developmental, four were identified as having a mix of specific mechanisms, and five which constituted other types of programmes (I.e. scared straight, curfews). While only three programmes were directly identified as developmental, many of these programmes drew upon developmental elements by providing parenting and family-based skills and support. The majority of these findings found small to moderately successful outcomes, with the exception of some programmes, such as the *Scared Straight*, which was found to be decidedly ineffective. Parenting programmes in particular seemed to indicate successful outcomes, but follow-up reporting varied. Overall, these findings seem to indicate that effective progress is being made in antisocial prevention programmes, though findings also highlighted the need for future studies for additional longitudinal studies, or more rigorous follow-up reporting post-delivery.

Table 3.4: Antisocial Focused Prevention Programmes (29)

	School	Home/Family	Community	Mix
Universal	Alperin 2021 (NA) Barnes 2014 (Y) Curran 2017 (Y)	Michelson 2013 (Y) Tezian 2005 (NA)	Wilson 2016 (N)	
Selected		Barlow 2016 (Y) Lundahl 2006 (Y) Mejia 2012 (NA) Menting 2013 (Y) Nixon 2002 (Y) Yoshikawa 1995 (NA) Yoshikawa 1994 (Y)		Brannstrom 2016 (Y)
Indicated		Gardner 2016 Drummond 2002		Goense 2016 (NA) Maynard 2012 (Y)
All/Mix	Ferguson 2007 (M)	Dretzke 2002 (M) Losel 2003 (M) Fagan 2016 (M) Murano 2020 (M) Van der Pol 2017(M)	Petrosino 2013(M)	Burkey 2018 (M) Grove 2008 (M) Hendriks 2018 (M) Sawyer 2015(M)

Y = Successful; N = Unsuccessful; NA = Not determined; NR = Not relevant; ID = Insufficient Data
M = Mixed Results

3.3.4 Violence (8 Articles)

General Findings/description of data

This category includes a wide range of violent behaviours including general violence, gang activity and bullying as well as a wide variety of prevention types and programmes (see Table 3.5).

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Table 3.5: Articles on Violence

	Authors	Title	N=
1	Cox *et al*. (2016)	*Violence Prevention and Intervention Programmes for Adolescents in Australia: A Systematic Review	19
2	Hahn *et al*. (2007)	Therapeutic Foster Care for The Prevention of Violence: A Report on Recommendations of The Task Force on Community Preventive Services	5
3	Hahn *et al*. (2004)	*Effectiveness of Universal School-Based Programmes to Prevent Violent and Aggressive Behavior - A Systematic Review	53
4	Matjasko *et al*. (2012)	A Systematic Meta-Review of Evaluations of Youth Violence Prevention Programmes: Common and Divergent Findings From 25 Years of Meta-Analyses and Systematic Reviews	37
5	Melendez-Torres *et al.* (2016)	*Systematic Review and Meta-Analysis of Effects of Community-Delivered Positive Youth Development Interventions on Violence Outcomes	4
6	Mytton *et al*. (2006)	*School-Based Violence Prevention Programmes: Systematic Review of Secondary Prevention Trials	44
7	Tolan and Guerra (1994)	Prevention of Delinquency - Current Status and Issues	NA
8	Van Der Merwe and Dawes (2007)	*Youth Violence: A Review of Risk Factors, Causal Pathways and Effective Intervention	NA

** Studies which explicitly indicated either multiple countries were included in their review and/or were non-North American in nature.*

A total of eight reviews were found which focused specifically on violence. The period between the years of 2000 and 2010 saw the largest number of reviews (n=4) take place, with only one in the period from 1990 to 2000, and three in the period from 2010 to 2021. As these findings are reviews of reviews, they represent a fraction of the number of actual studies, which have taken place during this period. The combined number of studies analysed within these eight reviews include approximately (n=162) 160 pertaining to the topic of juvenile delinquent violence. The largest body of work concerning youth violence includes school-based or school-targeted violence. Two reviews focused on school-based violence, one on a universal level, the other on a targeted level, but with a combined total of 97 articles being reviews. As schools offer a natural opportunity to target youths, the high level of focus and study in a school environment is only logical. Two other studies focus on the Family (n=4) and Community (n=5) environments, though with a significantly lower volume of research. Additionally, there were four reviews which examined studies across all levels and settings, which provides an opportunity for a broader perspective of this issue. There were three studies that discussed multi-prevention level programmes or interventions.

Results

Overall, the school-based/targeted programmes were found to be effective in reducing violent behaviours. The universal programmes were generally effective across a wide variety of school years and different types of populations while the targeted programmes found modest results for

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aggression in high-risk children (Hahn *et al*. 2007; Mytton *et al*. 2006). Within both of these reviews, stipulations were made concerning the overall results. Both articles highlighted the need for further high-quality research concerning context and delivery aspects – for example the delivery and substance of the programme is typically targeted towards boys. Testing concerning the development, application and mixed population delivery or 'girls only' programmes help to prove significant insight into effective violence prevention programmes.

Table 3.6: Violence Focused Prevention Programmes (8)

	School	Home/Family	Community	Mix
Universal	Hahn 2007 (Y)		Melendez-Torres 2016 (ID)	
Selective	Mytton 2002 (Y)			
Indicative		Hahn 2004 (ID)		
All/Mix				Cox 2016 (M) Matjasko 2012 (M) Tolan 1994 (M) Van Der Merwe 2007 (M)

Y = Successful; N = Unsuccessful; NA = Not determined; NR = Not relevant; ID = Insufficient Data
M = Mixed Results

The majority of literature included in our Review found there to be issues with research quality and all highlighted the need for further research on this topic (see Table 3.6). Specific areas that might benefit from more research include isolating factors concerning violence, context and delivery-based factors (i.e. school age, population, instructor training) and duration/multiple applications of the programmes. Context and delivery-based factors presents the most opportunity for further insight into this field, with particular focus on whether mixed-gender or gender-specific programmes may have an effect as gender specific research faces a considerable knowledge gap and might benefit from further research.

3.3.5 Multi-Risk Factored (11 Articles)

General Findings/description of data

A total of 11 multi-risk factored programmes were found in the process of this *Review*. This literature represents a progressive trend of considering and often targeting a variety of individual risks concurrently (see Table 3.7).

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Table 3.7: Articles on Multi-Risk Factors

	Authors	Title	N=
1	de Vries *et al*. (2015)	*Practitioner Review: Effective Ingredients of Prevention Programmes for Youth at Risk of Persistent Juvenile Delinquency - Recommendations for Clinical Practice	29
2	Deković *et al*. (2011)	Effects of Early Prevention Programmes on Adult Criminal Offending: A Meta-Analysis	9
3	DuBois *et al*. (2002)	Effectiveness of Mentoring Programmes for Youth: A Meta-Analytic Review	55
4	Fagan (2021)	Developmental Prevention Programmes Intended to Change Peer Risk and Protective Factors: A Review of The Evaluation Literature	33
5	Farrington and Welsh (2003)	*Family-Based Prevention of Offending: A Meta-Analysis	40
6	Goldner and Ben-Eliyahu (2021)	*Unpacking Community-Based Youth Mentoring Relationships: An Integrative Review	123
7	Knight *et al*. (2017)	*The Quality and Effectiveness of Interventions that Target Multiple Risk Factors Among Young People: A Systematic Review	13
8	MacArthur *et al*. (2018)	*Individual, Family and School level interventions targeting multiple risk behaviors	70
9	Merrill *et al*. (2017)	A Review of Social Problem-Solving Interventions: Past Findings, Current Status, and Future Directions	18
10	Statham (2004)	Effective Services to Support Children in Special Circumstances	NA
11	Tolan *et al*. (2014)	Mentoring Programmes to Affect Delinquency and Associated Outcomes of Youth at Risk: A Comprehensive Meta-Analytic Review	46

** Studies which explicitly indicated either multiple countries were included in their review and/or were non-North American in nature.*

All the research in this section reflects a multi-risk factored approach. It is understandable, therefore, that the data in Table 3.8 coalesce around the mixed categories for the various prevention levels and programme focus. Only one article focused on school-based programmes (Merrill e*t al*. 2017), while three articles placed focus on family-based programmes (Deković *et al*. 2011; Fagan 2021; Farrington and Welsh 2003). Two separate articles considered multiple risk factors from a selected (or targeted) perspective (Dubois *et al*. 2002), while the other considered the indicated (individual) perspective (Statham 2004). The remaining five articles represent a complete mix of the various levels and targets for prevention and are meant to target a variety of behaviours or actions. Any analysis concerning environment or context that might be completed for the literature regarding multi-risk factored focused prevention programmes would fail to provide any meaningful insight, as they represent a mix of various types of prevention programmes, with different delivery methods and goals. While they provide valuable insight for other outputs, their diverse nature makes it difficult to make useful comparisons or evaluations for the purposes of where the programmes were delivered or how they were executed.

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Results

Almost all of these articles indicated a successful result, though many included caveats regarding implementation and the need for further research. Multi-risk factored types of prevention have generally been accepted to provide positive results for juvenile delinquency, though as has been highlighted previously, there needs to be further research into the specific mechanisms and outcomes relating to this type of research. This type of prevention programme seems to provide an integrated approach, befitting the complex nature of juvenile delinquency and the variety of factors that influence it.

Table 3.8: Multi-Risk Factored Focused Prevention Programmes (11)

	School	Home/Family	Community	Mix
Universal				
Selected				DuBois 2002 (Y)
Indicated				Statham 2004 (NA)
All/Mix	Merrill 2017 (M)	Dekovic 2011 (M) Fagan 2021(M) Farrington 2003 (M)		MacArthur 2018 (M) de Vries 2015 (M) Tolan 2014 (M) Goldner 2021 (M) Knight 2017 (M)

Y = Successful; N = Unsuccessful; NA = Not determined; NR = Not relevant; ID = Insufficient Data; M = Mixed Results

One of the main lessons that emerged from examining this literature, was that while ultimately deemed successful, the mechanisms or elements of a programme could not be determined. Further work designed to test, measure and evaluate these subtle mechanisms in relation to various contexts and populations could provide valuable insight into empirically tested effective prevention programmes and interventions. While multi-risk factored programmes have proven to be successful, it is clear a more thorough understanding of the relevant mechanisms is necessary for this approach.

3.4 Discussion about Mechanisms, Context and Implementation

3.4.1 Mechanisms

From our findings, the most effective mechanism which can currently be found in seeking to prevent juvenile delinquency relate to developmental prevention programmes, multi-risk factored programmes, and programmes which tailor such programmes to specific contexts and populations. In the previous section we have discussed the specific outcomes for each of the four categories of juvenile delinquent behaviour or actions, and concluded the following:

Addiction: A wide range of addiction specific programmes have been implemented and found to have mixed results varying from a lack of data or successful universal campaigns.

Antisocial: targeted family-based programmes or intervention proved to be most prevalent, and also indicated successful outcomes for majority of findings.

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Violence: The most prominent programmes for violence specific behaviours included mixed levels of delivery as well as targets, though successful programmes included school-based universal and selected levels.
Multi-Risk Factor: Likely due to the nature of this approach, the most successful findings for multi-risk factor programmes included mixed levels of delivery and target population.

3.4.2 Context and Implementation

In discussing the context and implementation of juvenile delinquency interventions, the multitude of antisocial behaviour and deviant actions that constitute this focus area need to be addressed. As four main groupings have been determined (behaviour issues, deviant acts, addiction issues and mentoring programmes), we frame our discussion within these four areas. One of the major difficulties faced within this focus area was organising findings in a way by which comparisons and analysis could be made in a meaningful manner. Within each of these four areas the focus, methodology and intended outcomes may vary significantly, hence we provide a generalized overview for each area separately.

Given that we had excluded tertiary prevention programmes and interventions, it is not surprising that antisocial behaviours and actions represented the largest category within juvenile delinquency. Context was usually acknowledged within the findings, but often failed to provide any meaningful breakdown or analysis of the contextual setting for the programme or it's targeted population. While many of the findings at least indicated the socioeconomic status of the environment or community in which it takes place, further elements such as gender-specific measures were also lacking across much of the literature. Overall, we cannot provide any significant outcomes regarding context, other than our observation that more detailed measure and analysis of context would benefit future research greatly.

3.4.3 Evaluation

Throughout the majority of the findings, evaluation was an issue that was raised consistently, and was not only highlighted in large portions of our findings but is also evident from the findings presented here. While many of the included articles provided details concerning how, when and if their programmes were evaluated, a large portion failed to mention any method of evaluation – either in the short or long term. This lack of evaluation compromises the results of such programmes and fails to acknowledge the context and specifics of how a programme contributes to outcomes. The *Review* sought to conduct a review of reviews, and our inability to provide any distinct conclusions regarding if and how evaluations have taken place across multiple publications speaks volumes to the current state of research. This is not to suggest that programme evaluations do not occur, but simply to stress that there is a lack of formal evaluations that translate or operate on a national or large-scale level.

As stated previously, the majority of these findings originated in North America or the UK, and so any types of evaluations which were discussed were typically on a local or state level. We had hoped

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to provide more of a European context but failed to find any EU-specific evaluations which have been used on an international level – though this may have simply been a limitation due to the research and time restraints of this project, or a language barrier. This also may be a result of the fragmented nature of juvenile research, which is always viewed through a country/region specific perspective, rather than an international perspective which is utilised for traditional forms of crime.

3.4.4 Focus Area Specific Limitation

There is a wide variety of literature that incorporates multi-disciplinary research, including medical, psychological and pharmaceutical. Due to the nature of the *Review*, we limited our scope to exclude findings that may have revealed innovative multi-disciplinary approaches. This also resulted in the exclusion of specific behavioural issues, such as ADHD and dyslexia, or mental health issues such as depression or anxiety. These mental health and behavioural issues represent a large volume of research that has important implications for the prevention of juvenile delinquency, especially when considered in tandem with developmental prevention measures.

3.5 Key Lessons

3.5.1 Further Research

The most consistent theme across the varying levels and focuses within juvenile delinquency is that there needs to be: (1) more research focusing specifically on the prevention of juvenile delinquency; (2) more empirical and rigorous research regarding prevention intervention outcomes/effectiveness; and (3) more focused examination of correlation versus causality. Similarly, much of the data indicated a need for targeted research on specific populations/contexts, as much of the research was unable to take contextual aspects into consideration.

3.5.2 Prevention Focus and Progress

Over the course of the past 30 years, there has been a distinct move away from solely tertiary prevention programmes, and instead more focus placed on secondary and specifically primary types of prevention. In particular, developmental focused interventions have demonstrated promising results, but also remains an area that could benefit from more research, with specific measures regarding prevention specific programmes and later outcomes on delinquency (and potential criminal lifestyles). Multi-risk component programmes (programmes that targeted multiple risk factors) generally appear to be more successful than single-factored programmes, but much of the data indicated that this may be a result of inadequate testing and measures for the intended behaviours.

3.5.3 European Perspective

Considering the entirety of the work examined in this *Review*, it is clear that there is a significant lack of prevention specific literature concerning Europe, as the majority of publications and literature relevant to juvenile delinquency issues are from a North American perspective. Additionally, the literature examined here demonstrates a varying spectrum of scientific rigour concerning research design. It highlights a general lack of research that considers measures relating

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to the progression of juvenile delinquent acts or behaviours, pathways and implications for future engagement with the criminal justice system - i.e. long-term assessments, context-specific measures and longitudinal studies.

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4 Preventing Radicalisation Leading to Violent Extremism

The following section presents a brief overview of the second IcARUS focus area, preventing radicalisation leading to violent extremism. The structure of this section mirrors that outlined in the research questions below. After defining the focus area, we provide overviews of the studies and reports forming the foundation of this section of the *Review*, as well as the most frequently cited shortcoming in the field, i.e. the insufficient evidence base. We go on to present a typology of the interventions in the field, distinguishing between universal and targeted interventions, before looking at the different levels at which interventions are delivered. The second research question addressing underlying mechanisms, context and implementation is presented in section 4.5. After an overview of the project's cross-cutting themes identified in the literature, we highlight the remaining knowledge gaps and institutional barriers identified, before concluding this section with the key lessons from the focus area.

4.1 Research Questions

1) What do we know about the effectiveness of prevention initiatives or programmes in the field of preventing radicalisation leading to violent extremism and how has this knowledge changed over the last 30 years?
2) What do we know about the importance of context and implementation in shaping the effectiveness of interventions in the field of preventing radicalisation leading to violent extremism?
3) What knowledge gaps and which institutional barriers persist?
4) What lessons can be learnt from the accumulated knowledge base that should inform future innovative approaches to the prevention of radicalisation leading to violent extremism?

4.2 Definition of Focus Area

Almost two decades on from the signal events of the early 2000s, while the term 'radicalisation' has become ubiquitous in everyday parlance and the subject of what Abbas (2021: 53) refers to as a 'discursive explosion', there is still no commonly accepted definition. Yet, how a country decides to define radicalisation and extremism for policy purposes has a significant effect on the direction and approach for subsequent interventions (Hardy 2018). Often, the terms are used interchangeably; radicalisation is frequently associated with Islamist fundamentalists, whereas the term extremism tends to be used in connection with right-wing or political ideologies. This is problematic for many reasons, including the resultant association between radicalisation and terrorism, and the subsequent stigmatisation of Muslims. The lack of common or shared conceptual parameters inevitably hinders both cross-jurisdictional comparisons and the transferability of effective programmes. Much of the literature in the field uses the terms preventing violent extremism (PVE), countering violent extremism (CVE), or a combination of the two (C/PVE or P/CVE). Any reference to PVE or CVE in our *Review* will reflect the terminology used in the literature we are describing. In

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line with the project definition of preventing radicalisation leading to violent extremism, the *Review* excludes any tertiary interventions focusing on de-radicalisation programmes, instead focusing on primary and secondary interventions.

For our purposes, the following definition was agreed by the IcARUS Consortium for the Review:
Policies and programmes that seek to reduce or prevent individuals from the risk of involvement in terrorism or violent extremism. These interventions aim to divert those people susceptible to violent extremism from embarking on a path to radicalisation. These measures avoid the use of coercive and repressive means, while being directed at addressing some of the conditions that may drive individuals to extremist violence.

4.3 Overview of the Literature

4.3.1 Introduction

The past two decades have seen an unprecedented focus on policies addressing the threat of radicalisation and violent extremism, with exponentially increasing funds invested in programmes aimed at preventing individuals from becoming radicalised. Counter-terrorism policies in the early 2000s were the key driver for the increasing proliferation of radicalisation as a concept (Abbas 2021). It is worth reiterating that several European countries have a longstanding history of addressing extremist ideologies, associated with the far right and left, as well as separatist movements, pre-dating the more recent focus on Islamist extremism. Many of these experiences have laid the foundations for evidence-based interventions (and policy-making) dealing with the more recent Islamist threat (Hardy 2019). Moreover, recent figures suggest that the risk posed by right-wing extremists is far greater and increasing in many countries, including Germany and the UK (Bundesministerium des Innern und für Heimat 2021; Home Office 2021).

In line with the increasing number of interventions, academic research and evaluations have also increased in the last few years (Gielen 2019). Yet, despite the eye-watering expenditure by governments, and previously unparalleled engagement by academics and practitioners worldwide, there is a distinct lack of rigorous evaluations supporting the effectiveness of many of these interventions. As a result, very few CVE policies are based on empirical evidence, most are based on theoretical frameworks and conceptual models (Gielen 2019).

4.3.2 Included Reviews

Our search of key terms associated with the prevention of radicalisation leading to violent extremism, outlined in the *Methodology and Data Collection* (Section 9), initially yielded 58 results. After removal of duplicates, theses, as well as closer screening, 29 reviews were retained and form the basis of our *Review*.

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The studies cover a broad range of intervention types, as well as focus groups and case studies. In addition to the inclusion of reviews featuring evaluations of interventions, papers providing relevant insights and experiences relating to context and implementation were included in our *Review*. As such, there is considerable variation in the number of studies reviewed, ranging from zero to 310. The majority of the included reviews were focused on European contexts, with many making reference to the UK (especially the Prevent programme). It is interesting to note, that the Dutch literature included a practitioner-focused approach, thus contributing significantly to the sections on context and implementation.

An overview of the 29 included studies is presented in Table 4.1 (below). Congruent with the comparative infancy of the field, the earliest study meeting our selection criteria dates back to 2010.

Table 4.1: Overview of reviews included for analysis

Authors	Title	N
Aiello *et al*. (2018)	Preventing violent radicalization of youth through dialogic evidence-based policies	Not specified
Ali *et al*. (2017)	Initiatives that Counter Violent Radicalization but are Perceived as Suitable by Targeted Communities	N/A
Bilazarian (2020)	Countering Violent Extremist Narratives Online: Lessons From Offline Countering Violent Extremism	6
Bouhana and Wikström (2011)	Al Qai'da-Influenced Radicalisation: A Rapid Evidence Assessment Guided by Situational Action Theory	15
Brady and Marsden (2021)	Women and Preventing and Countering Violent Extremism Interventions	Not specified
Campelo *et al*. (2018)	Who are the European youths willing to engage in radicalisation? A multidisciplinary review of their psychological and social profiles	22
Carthy et al. (2020)	Counter-narratives for the prevention of violent radicalisation: A systematic review of targeted interventions.	19
Christman (2012)	Preventing Religious Radicalisation and Violent Extremism: A Systematic Review of the Research Evidence.	310
Eijkman and Roodnat (2017)	Beware of Branding Someone a Terrorist: Local Professionals on Person-Specific Interventions to Counter Extremism.	Not specified
Emmelkamp *et al*. (2020)	Risk factors for (violent) radicalization in juveniles: A multilevel meta-analysis	25
Gielen (2019)	Countering Violent Extremism: A Realist Review for Assessing What Works, for Whom, in What Circumstances, and How?	73
Gøtzsche-Astrup (2018)	The time for causal designs: Review and evaluation of empirical support for mechanisms of political radicalisation.	7
Jahnke *et al*. (2021)	Predictors of Political Violence Outcomes among Young People: A Systematic Review and Meta-Analysis.	95
Jugl *et al*. (2021)	Psychosocial Prevention Programs against Radicalization and Extremism: A Meta-Analysis of Outcome Evaluations	8

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Lösel *et al*. (2020)	Resilience against political and religious extremism, radicalization, and related violence: A systematic review of studies on protective factors.	28
Lösel *et al*. (2018)	Protective Factors Against Extremism and Violent Radicalization: A Systematic Review of Research	17
Mazerolle *et al*. (2020)	Police programmes that seek to increase community connectedness for reducing violent extremism behaviour, attitudes and beliefs.	1
Pels and de Ruyter (2012)	The influence of education and socialization on radicalization: An exploration of theoretical presumptions and empirical research.	Not specified
Pistone *et al*. (2019)	A scoping review of interventions for preventing and countering violent extremism: Current status and implications for future research	112
Pratchett *et al*. (2010)	Preventing Support for Violent Extremism through Community Interventions: A Review of the Evidence.	70
Prislan *et al*. (2020)	The Role of Civil Society and Communities in Countering Violent Extremism and Radicalisation	N/A
Romaniuk (2015)	Does CVE Work? Lessons Learned From the Global Effort to Counter Violent Extremism.	27
Sinai *et al*. (2019)	Research note: Effectiveness in counter-terrorism and countering violent extremism: A literature review.	208
Sjøen and Jore (2019)	Preventing extremism through education: exploring impacts and implications of counter-radicalisation efforts.	23
Sklad and Park (2017)	Examining the potential role of education in the prevention of radicalization from the psychological perspective	Not specified
Stephens *et al*. (2021)	Preventing Violent Extremism: A Review of the Literature.	73
Taylor and Soni (2017)	Preventing radicalisation: a systematic review of literature considering the lived experiences of the UK's Prevent strategy in educational settings.	7
Wolfowicz *et al*. (2020)	Cognitive and behavioral radicalization: A systematic review of the putative risk and protective factors	57
Young *et al*. (2015)	Translating conceptualizations into practical suggestions: What the literature on radicalization can offer to practitioners.	N/A

4.3.3 Relative Lack of Evaluations and Evidence-base

Somewhat counterintuitively to the abundance of academic research in the area, the most prominent thread running through the reviews is the lack of a solid evidence-base informing interventions preventing radicalisation leading to violent extremism (Christman 2012; Pistone *et al*. 2019; Pratchett *et al*. 2010). The lack of evidence is largely due to a lack of published programme evaluations, as many evaluations are never published (Romaniuk 2015). However, without sound evidence, the transferability of interventions may become more challenging, as anecdotal evidence of it working in one setting may not be sufficient to recommend its implementation in another without a deeper understanding of the theories of change, context and implementation.

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Empirical evidence remains difficult to come by, not least since current methods struggle to adequately reflect the inherent complexity of the underlying mechanisms at play without being able to sufficiently distinguish between causation and correlation (Ali *et al*. 2017; Emmelkamp *et al*. 2020), and outcome measures not being clearly defined (Feddes and Gallucci 2015). Outcome measures in the reviews examined often consisted of attitudes, beliefs, or behaviours towards radicalisation and extremist rhetoric, rather than actual incidences of extremist violence. These data were often collected via self-report instruments and interviews. Indeed, generalising any outcome measures is made even more challenging due to the lack of a consistent definition of the terms associated with the field of radicalisation and extremism, as well as the clearly context-dependent influences on any intervention (Sinai *et al*. 2019).

> *'[S]tudies of their effectiveness and critical discussion publications show a high level of critical awareness, but a low level of knowledge about actual effects within a field where many interventions are used and at high cost. This conclusion implies that there is a great need for researchers, research funding bodies, and political actors to reflect upon what type of knowledge is needed to assist future work within the field of preventing and countering violent extremism.'*
>
> Pistone *et al*. (2019: 23)

Pistone *et al*. (2019: 23) go on to suggest that the research evidence base might benefit from greater consideration of how evaluations of comparative effectiveness might best be applied when implementing interventions. Thankfully, there is a growing body of resources available to support those seeking to evaluate P/CVE initiatives, such as the RAND Violent Extremism Evaluation Measurement Framework (VEEM) (Baruch et *al*. 2018).[3]

4.4 Typology of Interventions

4.4.1 Introduction

Today, radicalisation is widely understood to be a process (Abbas 2021; Ali *et al*., 2017; Borum 2011; Emmelkamp et *al*. 2020; Lindekilde 2012; Young *et al*., 2015). While several different models have been proposed over the years (Borum 2011; Silber and Bhatt 2007; Young et *al*. 2015), many of these frameworks were neither grounded in theory nor derived from systematic research (Borum 2011). As such, these models offer a simplified description of the radicalisation process, but tell us little about what drives someone to actually engage in violence (Abbas 2021). Over time, there has

[3] https://www.rand.org/randeurope/research/projects/violent-extremism-evaluation-measurement-framework-veem.html

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been a shift away from the idea of a linear and generalizable process towards more of an understanding of the inherent complexity of the underlying person-specific factors and local context (Romaniuk 2015). Considering the importance of the underlying social process (Prislan et *al*. 2020), it is hardly surprising that individual trajectories vary not only between individuals, but also across communities, constantly evolving over time (Abbas 2021; Ali et *al*. 2017; Borum 2011). Understanding the underlying process of how and why radicalisation occurs is paramount to effective prevention efforts (Jugl et *al*. 2021), allowing us to identify multiple points of potential intervention.

Much of the work prior to 2014 focused on individual-level interventions (Feddes and Gallucci 2015), much of which centred around establishing individual risk factors. Since much of the work was built on existing scholarship on juvenile delinquency, it follows that the majority of interventions examined focus on adolescents and young adults. Targeted interventions (secondary prevention) include interventions aimed at individuals and small groups of individuals considered to be at-risk. Universal interventions (primary prevention), on the other hand, adopt a more general approach to discourage initial engagement with extremist narratives via more general/universal interventions targeted at entire groups.

4.4.2 Intervention Levels

Generally speaking, the focus in the field of radicalisation prevention has shifted from more targeted interventions examining individual risk factors and individual case studies in the early days, towards more universally targeted programmes. Initially, psychological factors, such as depression and mental illness, were considered strong indicators of radicalised individuals (Silber and Bhatt 2007), but these findings have now been largely dismissed (Bhui 2018). There are indications that studies focusing on the psychology of radicalisation are becoming more empirically robust (Gøtzsche-Astrup 2018).

Several studies identified risk factors associated with radicalisation, and while there is no one profile for individuals at risk of being radicalised, there are well documented factors associated with vulnerability (Bouhana and Wikström 2011). Many overlap with factors well known from juvenile delinquency, including age, low self-esteem, social networks, and quests for significance (Bouhana and Wikström 2011; Lösel *et al*. 2018). Activism and perceived in-group superiority were the two strongest risk factors associated with radicalisation in Emmelkamp and colleagues' (2020) meta-analysis. An accumulation of risk factors appears to be most indicative of risk, however, most only had medium to small effect sizes, making them unsuitable for use as predictive tools (Emmelkamp *et al*. 2020; Lösel *et al*. 2018). Moreover, the evidence base relating to individual-level interventions remains weak, in part due to the difficulties defining meaningful and consistent outcome measures (Romaniuk 2015).

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The flipside to risk factors is the identification of protective factors against radicalisation. These include non-violent peers, bonding to school, attachment to society. Indeed, those with favourable attitude to law, society and police legitimacy were less likely to turn violent (Lösel *et al*. 2018). Lösel and colleagues' (2020) recent systematic review of the research found that 30 protective factors showed significant effects. Protective factors such as an individual's attachment to society highlight the importance of connecting individuals to their community, and society as a whole. Interventions targeting large groups or society as a whole are often focused on the notion that prevention is better than cure. As such, they aim to prevent individuals from becoming radicalised in the first place, by focusing on equipping particular target groups, mainly adolescents and young adults, with the tools to critically engage with any extremist narratives, fostering integration and building resilience, in other words, by engaging the theories of change or mechanisms underlying the intervention. These are discussed further in Section 4.5.1 (below).

4.4.3 Levels of Delivery

Interventions aimed at preventing radicalisation leading to violent extremism are delivered at different levels: individual; family/peer; education; community; or a mix of these. At the individual level, Jugl and colleagues (2021) found that interventions focusing on psychological outcomes, extremist attitudes and cognitive styles resulted in changing the individuals' beliefs.

The role of families in the radicalisation process remains comparatively unexplored (Young *et al*. 2015), but shows promise. Recognising the role of families in supporting individuals at risk of or having been radicalised has been key to successful interventions in Germany and Norway (Hardy 2019). Families have been found to be of key importance throughout the different stages of preventing and countering violent extremism, from increasing resilience through to de-radicalisation programmes (Gielen 2019). Some promising research around the role of peers was providing them with anonymous ways of drawing attention to at-risk friends, as well as training peers to provide support and intervene with friends at risk, essentially become gatekeepers (Gielen 2019).

Many countries have introduced programmes in schools and universities as part of their counter-radicalisation policy strategies. The emphasis on policy, however, has resulted in a lack of evaluation, and a relatively weak evidence base, leaving many questions on impact and implementation unanswered (Sjøen and Jore 2019). British programmes have been heavily criticised for securitising educational settings, limiting freedom of expression for both students and staff (Taylor and Soni 2017). Instead of providing a safe space facilitating constructive debate on moral and political issues, it fostered a culture of fear and suspicion, exacerbating negative stereotypes, further polarising society, thus limiting the very pedagogical tools capable of bringing about the

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necessary shift in perception (Sklad and Park 2017; Taylor and Soni 2017). The emphasis on programmes delivered in educational settings is building resilience against all forms of extremism, focusing on civic values, human rights, and encouraging critical thinking (Sjøen and Jore 2019). An earlier review found that interventions delivered to young people were more effective when delivered outside of a schools setting, such as a youth club (Pratchett *et al.* 2010).

Finally, there is a clear consensus in the literature that local communities play a crucial part in the prevention of radicalisation (Pratchett *et al*. 2010; Sinai *et al*. 2019). Community-focused approaches build capacity, empower through debate and foster cooperation between the different agencies, such as law enforcement and municipal actors, and the local community. In Denmark, for example, community-level engagement developing initiatives focusing on those at risk of behavioural radicalisation was found to be more effective at tackling extremist beliefs than government-led interventions (Romaniuk 2015). Pratchett and colleagues (2010) found qualitative evidence suggesting that successful prevention efforts relied on the integration of communities. Community interventions are also well placed at targeting identified mechanisms (Romaniuk 2015). It is to this, we now turn.

4.5 Mechanisms, Context and Implementation

The examination of the literature highlights a growing awareness of the importance of identifying the mechanisms, understanding the local context impacting, and the significance of the actors and their partnerships delivering radicalisation interventions.

4.5.1 Mechanisms

In order for an intervention to succeed, it needs to define how it intends to affect the outcome, i.e., identifying the mechanisms thought to prevent radicalisation (Bouhana and Wikström 2011). Many of the underlying factors associated with radicalisation and extremism are well researched in other disciplines and provide useful intervention insights. Developmental factors and milestones, such as developing a personal, social and political identity, forming new relationships and redefining attachments make adolescents susceptible to radical beliefs (Pels and de Ruyter 2012).

By far the most promising and overarching concept showing promise is that of resilience, not least due to its applicability at multiple levels of intervention. Stephens *et al*. (2021) propose that resilience could provide the foundation for an integrated framework of prevention. Popular approaches focus on developing cognitive and critical thinking skills, empathy, reinforcing shared values; addressing marginalisation by fostering a sense of belonging, encouraging dialogue in a space conducive to explore and critique different ideologies, and provide alternatives; and encouraging partnerships between community and government organisations (Gielen 2019; Stephens *et al*. 2021). Strengthening resilience in young people is a key strategy employed by Dutch

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municipalities (Eijkman and Roodnat 2017). Currently, however, there is little rigorous empirical evidence to support interventions focusing on resilience (Sjøen and Jore 2019). Consequently, more empirical evidence is needed.

The other prominent mechanism identified in the literature was countering (extremist) narratives. Supporting evidence for interventions is weak, with Carthy and colleagues (2020) concluding it was not the most effective method to tackle radicalisation. While Gielen (2019) did find evidence of successful interventions, but these were very location dependent.

4.5.2 Context

Recognising the fundamental importance and variability of local context and its associated features and indicators within different communities is a common theme identified in the literature reviewed, and increasingly embraced by practitioners (Romaniuk, 2015). This is particularly salient as interventions aimed at preventing radicalisation may be part of a national strategy, but delivered at a local or individual level. Understanding that target groups or individuals vary considerably between adjacent neighbourhoods, never mind different cities, thus creating interventions that can be tailored to their particular cultural or religious values and socio-economic circumstances is a key prerequisite of success. Therefore, evaluations should always be assessed against the context in which they are conducted (Eijkman and Roodnat 2017), only then can meaningful lessons be learnt, and potential transferability to other locations assessed.

4.5.3 Implementation

Implementation is another crucial aspect of any successful intervention. Key factors include the administrative structures in place, as well as the individual(s) tasked with delivering the intervention, i.e., the actors. The pervading theme to emerge from the literature examined is the importance of multi-agency partnerships.

Given the importance of intervening in educational settings, it is important to highlight the important role teachers play in a student's propensity to engage with extremist ideas. As such, their ability to engage students in, and deal with difficult issues and conversations in a non-discriminatory manner is key to building not only resilience, but fostering a sense of belonging to the school community, especially for children from minority backgrounds (Pels and de Ruyter 2012). However, assuming they possess the required skills to do so, teachers may be reluctant to discuss potentially controversial or divisive topics for fear of repercussions from either parents, or the school itself. Even if not directly involved in the delivery of prevention programmes, teachers play an important role in ensuring students receive the necessary support after experiencing a traumatic life event, such as bereavement, ensuring these do not turn into trigger events setting them on a quest for meaning or significance (Christman 2012).

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The different levels at which interventions are implemented will have a considerable effect on who is tasked with its delivery, in turn affecting the recipients' willingness to engage. For example, while many P/CVE interventions delivered by law enforcement are met with apprehension and suspicion (Ali *et al*. 2017), they can successfully focus on community connectedness (Mazerolle *et al*. 2020; Prislan *et al*. 2020). Trust between those delivering programs and its participants is crucial if an intervention is to succeed. In any PVE context, trust between a law enforcement or government actor and Muslim communities is crucial as it lessens the perception of belonging to a 'suspect community' and thus lessens the danger of the intervention becoming counterproductive (Ali *et al*. 2017; Cherney and Murphy 2016; Gielen 2019; Mythen 2012). Indeed, it is also crucial to ensure trust between different partners, ensuring confidentiality of sensitive information relating to at-risk individuals or communities.

Effective interventions require multifaceted and cohesive approach involving a wide range of partners at all levels of intervention. While the importance of national governments in setting counter-radicalisation policies cannot be dismissed, the role of municipal actors is crucial in ensuring preventive radicalisation interventions are implemented successfully. Municipal level professionals are ideally situated not only to identify any signs of radicalisation, but also because they have access to the communities affected (Eijkman and Roodnat, 2017). The Dutch model delivers targeted interventions to small, at-risk groups, but an extensive support network, including peers, family, teachers, coaches, religious leaders and even local businesses, is mobilised in support; allowing for targeted responses tailored to the individual and context (Eijkman and Roodnat 2017). Romaniuk (2015) highlights how effective partnerships between government and civil society organisations, especially in relation to P/CVE, bring inherent challenges. These include governments having to limit which NGOs to engage to ensure adequate representativeness, to NGOs grappling between their dual role of advocating for their community on the one hand, while being reliant on government funding to deliver on the other. Nonetheless, there is a growing recognition of the need to involve end users in the design, delivery and promotion of interventions so as not to undermine their effectiveness (Aiello *et al*. 2018; Ali *et al*. 2017).

4.6 Cross-Cutting Themes

Close to three quarters of the papers reviewed addressed at least one of the four cross-cutting themes. The most frequently raised theme, as is reflected in the previous sections, was that of governance and diversification of actors, addressed in 18 (62%) of the reviews. The importance of designing interventions involving and tailored to communities and creating multi-agency partnerships is reflected throughout this *Review*.

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Brady and Marsden's (2021) review found that most of the research in the counter extremism field is in fact 'gender blind', with few studies specifically focusing on interventions designed specifically for girls, revealing a weak evidence base on how best to divert females away from violent extremism. Most of the research incorporating gender tends to focus on Islamist ideologies.

Table 4.2: Cross-Ctting Themes Represented in the Review

Governance and Diversification of Actors	*Gender*	*Cyber/Technology*	*Transnational and Cross-border*
62% (18)	21% (6)	17% (5)	3% (1)

Technological advances over the last three decades have fundamentally changed the methods of dissemination of extremist ideologies, widening the potential audience (Silber and Bhatt 2007). Social media in particular has changed the way people engage with the online space, reaching a younger target audience (Campelo *et al*. 2018). As such, schools could play a valuable role in teaching digital and media literacy, enabling pupils to assess the veracity of the information presented to them (Macnair and Frank 2017). As technology continues to evolve, so do the methods of radicalisation; recent UK Home Office figures (2021) detailing a shift towards online gaming platforms as a means of recruitment for right-wing extremist groups. These groups have also exploited the rise in conspiracy theories around the Covid-19 pandemic.

It is worth noting that the reviews in our sample do not reflect the amount of research out there in this area (Neumann 2013; Stevens and Neumann 2009; von Behr *et al*. 2013). For instance, while the role of the internet is frequently cited in a negative light, it is increasingly being used as a platform for interventions preventing radicalisation (Markus Pausch, Heiko Berner and Nedžad Moćević, Interview), though currently there is little evidence on their effectiveness (Davies *et al*. 2016). Finally, transnational and cross-border themes were only tangentially discussed in one paper (Gielen 2019). An overview of the distribution of cross-cutting themes is presented in Table 4.2 (above).

4.7 Remaining Knowledge Gaps and Barriers to Implementation

The lack of consistent definitions of key concepts continues to create difficulties, not only for evaluation purposes. As a consequence, comparison and transferability of programmes locally, nationally and internationally. While we can call for universally accepted definitions of what exactly is meant by radicalisation, countering and/or preventing violent extremism, these are so intrinsically tied to local and national perceptions and experiences, it is unlikely such a consensus will happen, not on an international level. Given the status quo, it is paramount for any programme to define clearly the parameters they are working with. This goes for other key concepts, such as community. While the concept of resilience acts as a useful umbrella term to frame several different mechanisms

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designed to prevent radicalisation, it is important to highlight that the concept is notoriously difficult to define, and thus to evaluate.

Romaniuk (2015) reiterated that interventions in the field are by their very nature slow and gradual, meaning evaluations need to be able to reflect changes over a longer intervention period. While striving towards more appropriate longitudinal evaluations seems appropriate, this often conflicts with the short-term political cycles and priorities (Pausch *et al*. 2021).

This section has clearly demonstrated the general consensus of building representative and multi-faceted partnerships. In interview, Markus Pausch, Heiko Berner and Nedžad Moćević cogently highlighted that collaborations between certain professional groups may be characterised by inherent mistrust, for example, between law enforcement and social workers. While this is not the case in every country, it remains a barrier to successful implementation in some countries.

4.8 Key Lessons in Preventing Radicalisation Leading to Violent Extremism

The review of the literature in the field of preventing radicalisation leading to violent extremism provides some important lessons for future work in the field.

Improving Evaluations

- In the absence of a common and consistent definition, focus on clearly defining the aim of the intervention and any context-dependent influences (Sinai *et al*. 2019).
- Clearly define meaningful and consistent outcome measures for evaluations to be able to determine success; this also allows for comparison and increased transferability to different locations (Romaniuk 2015).
- Interventions should be evaluated against the context in which they are conducted, incorporating context-dependent influences in the definition and/or interpretation of outcome measures (Eijkman and Roodnat, 2017; Sinai et al., 2019).
- Distinguish between and conduct process evaluation (including participation and dialogue as indicators and perception of target groups) and outcome evaluation (Pausch *et al*. 2021).

The Importance of Partnerships

- Developing inclusive and community-focused programmes ensures broad applicability, mindful of and suited to the local context.
- Targeted, secondary prevention interventions should consider enlisting a wide support network - peers, family, teachers, coaches, religious leaders, etc. - allowing for responses tailored to individual and local contexts (Eijkman and Roodnat 2017).
- Clearly communicate expectations between partners from the outset (Pausch *et al*. 2021).

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On Resilience

- Using resilience as the foundation for an integrated framework of prevention - as proposed by Stephens and colleagues (2021) - appears to show promise due to its holistic approach and wide applicability (Pausch *et al*. 2021).
- For primary prevention programmes in educational settings to be successful and not counterproductive, evidence highlights they need to:
  - Ensure integration of all minorities;
  - Equip students with tools to learn critical thinking, rather than focusing on a particular ideology or cause;
  - Empower students with ways in which they can actively participate in the democratic process;
  - Clearly define core values (e.g. democracy, human rights);
  - Provide a safe space for exploration and discussion without the fear of referral to authorities.

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5 Preventing and Reducing Trafficking and Organised Crime

The following section presents an overview of the third IcARUS focus area, preventing and reducing trafficking and organised crime. The structure of this section mirrors the one outlined in the research questions below. After defining the focus area, we provide an overview of the studies and reports forming the foundation of this section of the *Review*. We go on to present a typology of the interventions in the field, distinguishing between criminal justice, administrative and victim-focused protection approaches. The second research question addressing underlying mechanisms, context and implementation is presented in Section 5.5. After an overview of the project's cross-cutting themes identified in the literature, we conclude this section highlighting the remaining knowledge gaps and institutional barriers identified, concluding with the key lessons from the review.

5.1 Research Questions

1) What do we know about the effectiveness of prevention initiatives or programmes in the field of preventing and reducing trafficking and organised crime and how has this knowledge changed over the last 30 years?
2) What do we know about the importance of context and implementation in shaping the effectiveness of interventions in the field of preventing and reducing trafficking and organised crime?
3) What knowledge gaps and which institutional barriers persist?
4) What lessons can be learnt from the accumulated knowledge base that should inform future innovative approaches regarding the prevention and reduction of trafficking and organised crime?

5.2 Definition of Focus Area

The key international instrument in the fight against organised crime and trafficking is the *UN Convention against Transnational Organised Crime* (UNTOC – also known as the Palermo Protocol),[4] adopted in 2000. In addition to pledging closer international cooperation, one of its major achievements was to create the first commonly accepted definition of key elements such as trafficking persons and smuggling migrants. On the European Union level, however, there are still discrepancies in definition between member states on what constitutes trafficking for labour exploitation (Cockbain, *et al*. 2018). Indeed, as with other focus areas, the lack of a consistent definition between agencies and organisations across different administrative levels can be problematic (Sergi 2021; van der Laan *et al*. 2011), making collaboration and comparison more

[4] The UNTOC, was supplemented with further relevant protocols, such as the *UN Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children,* the ***Protocol against the Smuggling of Migrants by Land, Sea and Air***, and the ***Protocol against the Illicit Manufacturing of and Trafficking in Firearms, their Parts and Components and Ammunition.***

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difficult to achieve. For our purposes, the following agreed definition formed the parameters of the review undertaken:

Strategies and measures that seek to prevent the smuggling and delivery of illegal goods and services by organised criminal groups in urban settings. The focus will be on interventions at the local and regional level, directed at changing the conditions allowing organised criminal groups to expand their activities within urban spaces. This includes interventions aimed at reducing the risk factors conducive to individual involvement in or exploitation by organised criminal activities.

5.3 Overview of the Literature

5.3.1 Introduction

Cities are arenas exploited by organised criminal groups to sell illegal goods, expand their businesses and establish a system of connections among members, clients and local communities. Along with 'market offences' (Levi and Maguire 2004; Naylor 2004), including gambling, narcotics, evading duty on alcohol and tobacco, and trafficking illegal products and 'predatory crimes' (Levi and Maguire 2004), including the trafficking of human beings in diverse industries - such as construction, agriculture and commercial fishing - the *Review* considers the investment of illegal revenues into legal activities, which are instrumental to the distribution of goods and services. This highlights how organised criminal groups can appropriate open, accessible and commercial spaces for illegal purposes, while establishing relationships with the legitimate societal context. Predominantly therefore, attention is given to primary and secondary prevention strategies targeted at altering the legal, administrative and social circumstances that enable organised criminals to flourish economically, as well as to reinforce their presence among local communities. Additionally, consideration is accorded to interventions aimed at lowering the risk of individuals being drawn into or involved in organised criminal activities.

5.3.2 Included Reviews

Our search of key terms relating to the prevention and reduction of trafficking and organised crime initially identified 87 papers (see Section 9 – *Methodology and Data Collection*). In addition to the inclusion of reviews featuring evaluations of interventions, papers providing insights relating to context and implementation, especially those at municipal level, were included to add more depth to the findings. After removal of duplicates, theses, as well as closer screening,[5] 15 papers were retained and form the basis of our *Review*. The number (N) of interventions or studies upon which a particular review is based is listed in the table below. Papers included for context are marked N/A. An overview of the included studies is presented in Table 5.1 below.

[5] Many of the initial search results were excluded due to their focus on gangs in a US context, deemed not to be directly relevant for the purposes of this *Review*.

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Table 5.1: Overview of Studies Included for Analysis

Authors	Title	N
Boulton *et al*. (2019)	Diverting young men from gangs: a qualitative evaluation	N/A
Braga *et al*. (2018)	Focused Deterrence Strategies and Crime Control: An Updated Systematic Review and Meta-Analysis of the Empirical Evidence	24
Caneppele and Mancuso (2012)	Are Protection Policies for Human Trafficking Victims Effective? An Analysis of the Italian Case	N/A
Cockbain *et al*. (2018)	Human trafficking for labour exploitation: the results of a two-phase systematic review mapping the European evidence base and synthesising key scientific research evidence	152
Davy (2016)	Anti–Human Trafficking Interventions: How Do We Know if They Are Working?	49
Derenčinović (2019)	Human trafficking in Southeastern Europe: Council of Europe perspective	N/A
Felbab-Brown (2013)	Focused Deterrence, Selective Targeting, Drug Trafficking and Organised Crime: Concepts and Practicalities	N/A
Huisman and Nelen (2007)	Gotham unbound Dutch style - The administrative approach to organized crime in Amsterdam	N/A
Levi and Maguire (2004)	Reducing and preventing organised crime: An evidence-based critique	22
Nelen (2004)	Hit them where it hurts most? The proceeds-of-crime approach in the Netherlands	N/A
Sergi (2021)	Policing the port, watching the city. Manifestations of organised crime in the port of Genoa	N/A
Such *et al*. (2020)	Modern slavery and public health: a rapid evidence assessment and an emergent public health approach	17
Van Dyke (2017)	Monitoring and Evaluation of Human Trafficking Partnerships in England and Wales	N/A
van der Laan *et al*. (2011)	Cross-border Trafficking In Human Beings: Prevention and Intervention Strategies for Reducing Sexual Exploitation	20
Zimmerman *et al*. (2021)	Human Trafficking: Results of a 5-Year Theory-Based Evaluation of Interventions to Prevent Trafficking of Women From South Asia	N/A

Of the 15 papers, seven (47%) focused on organised crime more generally, as compared to eight (53%) studies on aspects of human trafficking specifically. While trafficking of illegal goods is an inherent aspect of organised crime and its prevention, the majority of the literature identified uses the term 'trafficking' to refer to human trafficking, such as migrant smuggling and sexual or labour exploitation.

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As is clear from Table 5.1, the studies included lack the same review properties compared to previous focus areas, with fewer than half of the papers examining the evidence base through the lens of multiple other studies or interventions. Even where multiple papers were used as a foundation for review, the authors lament the lack of scientific rigour characterising these studies. In fact, neither the Campbell Systematic Review by van der Laan and colleagues (2011) nor Davy's (2016) evaluation of anti-human trafficking interventions identified a single study meeting their minimum criteria for evaluation rigour. Despite the large expenditure and abundance of interventions in the field of human trafficking in response to the Palermo Protocol in 2000, comparatively few have been evaluated sufficiently rigorously to determine their effectiveness (Cockbain *et al*. 2018; Davy 2016). Research in the field is predominantly qualitative, and the majority of the papers included in this *Review* are based on case studies, literature reviews and interviews with practitioners. The studies cover a broad range of intervention types, from analyses of legislative implementations and law enforcement strategies, a place-based examination of prevention in a port setting, to public health approaches in human trafficking.

It is worth noting that our search did not produce the volume of literature expected. This is likely a by-product of our search being limited to the published scholarly literature. Cockbain and colleagues' (2018) systematic review of labour trafficking found that only about a quarter of publications examined were scholarly papers compared to a large proportion of reports published by governmental/intergovernmental agencies and NGOs. Unfortunately, we were unable to include grey literature due to constraints beyond our control.

5.4 Typology of Interventions

5.4.1 Introduction

In contrast to the other focus areas, the prevention and reduction of trafficking and organised crime differs from other focus areas in two key aspects. Firstly, national, and in some cases even international, strategies and legislation directly affect and interact with municipal-level approaches, from law enforcement to local licencing, even education. Secondly, and closely related, is the cross-border nature of organised crime, and with it, the trafficking of illegal goods, services and human beings. In no other focus area is the transnational dimension as central as in preventing and reducing trafficking and organised crime. As such, we approach this section slightly differently from the preceding ones. Rather than focusing on universal or targeted interventions, we distinguish between criminal justice, administrative and victim-focused approaches, reflecting the different emphases within each. The criminal justice approach includes the legislative frameworks, as well as their enforcement - i.e. detection and prosecution - by law enforcement agencies and public prosecutors.

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5.4.2 The Criminal Justice Approach

The international legislative framework is set out in the Palermo Protocol and EU Directives on Preventing and Combating Trafficking in Human Beings and Protecting its Victims. The EU has also created an intelligence-led and evidence-based initiative to tackle criminal threats, the European multi-disciplinary platform against criminal threats (EMPACT). The cross-jurisdictional nature of organised crime has also led to the strengthening of international law enforcement cooperation via organisations such as Interpol and Europol.

At a national level, criminal law has been at the forefront of tackling organised crime and trafficking for many years, with a flurry of activity in the 1990s (Nelen 2004). In addition to laying out the statutory instruments to prosecute and convict individuals involved in organised crime, it also provides the foundation for probably one of the most well-known tools, that of asset freezing and seizure. While the proceeds-of-crime-approach enjoys widespread public support, its enforcement has been difficult to implement. Consequently, Nelen (2004) found it to be an ineffective tool to assert the state's ability to combat organised crime.

Focusing on the increased levels of violence often associated with organised crime, focused deterrence[6] and selective targeting strategies were first implemented in the US to reduce violent crime committed by groups actively involved in crime and gangs (Braga *et al*. 2018). The aim is to deter violent behaviour via a well-publicised multi-agency approach involving law enforcement, community mobilisation and social service actions highlighting increased and sustained police attention and action, coupled with social service assistance (Braga *et al*. 2018; Felbab-Brown 2013). The approach relies on the ability and willingness of the criminal justice system to impose punishments that impact on the group in meaningful ways (Felbab-Brown 2013). In a recent systematic review, Braga *et al*. found statistically significant reductions in the targeted crime in almost 80% of studies. It is, however, important to bear in mind that cause and effect can be difficult to disentangle from concurrent policing strategies (Felbab-Brown 2013). Moreover, replication of focused deterrence strategies in other jurisdictions has proven somewhat challenging.

Law enforcement approaches alone are not always sufficient to disrupt organised crime groups. Several countries have developed administrative and regulatory measures to complement the more traditional tools described above.

[6] Focused deterrence strategies are also known as 'pulling-levers' policing programmes.

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5.4.3 The Administrative Approach

The central tenant of the administrative approach is to reduce the opportunities to commit crime by creating barriers. Illegitimate profits are often laundered through legitimate businesses, disrupting and corrupting economies and communities (European Network on the Administrative Approach 2020). Local administrations have powers to frustrate and disrupt organise crime, for example, denying participation in bids for public contracts or tenders, withdrawing previously approved administrative decisions, and enhanced screening methods to assess the risk of criminal involvement (Huisman and Nelen 2007). At the forefront of the administrative approach is the establishment of partnerships between various agencies at different levels of government, as well as the private sector. The more agencies enter into partnership, the wider the range of measures at their disposal.[7]

> *'An administrative approach to serious and organised crime is a complementary way to prevent and tackle the misuse of the legal infrastructure through multi-agency cooperation by sharing information and taking actions in order to set up barriers.'*
>
> ENAA Definition

Italy and the Netherlands have been at the forefront of this approach for the past 20 years. In Amsterdam, for example, it created an open and, importantly, accountable auditing process for anyone bidding for municipal tenders (Huisman and Nelen 2007), reducing opportunities for money laundering, and allowing decisions on tenders and contracts to be refused or withdrawn if these could lead to criminal acts or financial benefits obtained from criminal activities (Nelen 2010). Publication of such measures can often have a pre-emptive effect. The prospect of being screened contributed to several applications for licences in Amsterdam withdrawing from the application process (Huisman and Nelen 2007).

5.4.4 Victim-focused Protection Approaches

In addition to focusing on prevention, prosecution of perpetrators and partnerships, a fourth pillar of UN and EU protocols and conventions in the field of human trafficking focuses on the protection of those individuals caught up in its net (Davy 2016; Derenčinović 2019; Van Dyke 2017). With it came the recognition that trafficked human beings should not be treated as criminals, but victims, implementing a non-punishment provision in many countries (Derenčinović 2019). As such, victim

[7] For a more detailed overview of the administrative approach to serious and organised crime in the EU, see (European Network on the Administrative Approach 2020).

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protection and assistance were gradually being incorporated into legislative frameworks around human trafficking.

In order to tackle effectively human trafficking and the provisions for victims, multi-agency partnerships, including the police, local authorities and NGOs, were created in several countries and regions. Italy, for example, created intergovernmental reintegration programmes involving regional and local authorities, as well as local businesses, issuing residence permits to victims, as well as helping them to find legal employment or support resuming their education (Caneppele and Mancuso 2012). Importantly, in Italy at least, these programmes are not tied to victim cooperation with law enforcement.

The increased focus on victim protection has led to an emergent public health approach to human trafficking and modern slavery (Such *et al*. 2020). Victims of various forms of human trafficking often suffer from ill mental and physical health (Cockbain *et al*., 2018; Such *et al*., 2020), providing additional avenues of identification, detection and intervention via health care professionals (Greenbaum *et al*. 2018). This holistic preventative approach highlights the centrality of multi-agency partnerships. Such and colleagues (2020) advocate for information to be shared between partners, and knowledge disseminated to inform decision-making and professional practice of all partners. Partnerships between law enforcement and public health practitioners do exist, however, Such *et al*. (2020) highlight that for such strategies to be effective, it is often necessary for criminal justice practices and institutions to reframe their views and procedures. Addressing both proximal and distal causes of modern slavery (Such *et al*. 2020), the public health approach could be a vital component in the prevention and reduction of trafficking and organised crime.

5.5 Mechanisms, Context and Implementation

The following section outlines the mechanisms underlying interventions in the field included in this *Review*. We go on to highlight the importance of considering the local context underlying the manifestations of organised crime and trafficking in different cities, before addressing some of the common issues around implementing prevention efforts in the field or organised crime and trafficking.

5.5.1 Mechanisms

The prime responsibility of dealing with organised crime lies with law enforcement and regulatory agencies. The mechanisms by which they seek to reduce organised crime and trafficking can be summarised using opportunity-reducing techniques commonly associated with situational crime prevention (SCP), such as reducing rewards and increasing effort and risks. Indeed, reducing one of the primary motivations for involvement in crime, i.e., the monetary gain via asset seizure, should not only act as a deterrent, but also affect their ability to reinvest profits in future operations (Nelen

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2004). The past few decades have seen the private sector taking on an increasingly active role in the reduction of organised crime (Levi and Maguire 2004). The financial sector in particular is seen as a vital partner assisting law enforcement with investigations into money laundering, [8] establishing the link between the legitimate and illegitimate economy (Nelen 2004).

While there is currently insufficient evidence to comment on the underlying mechanisms of focused deterrence strategies, Braga *et al*. (2018) point towards the procedural justice approach of engaging with offenders as showing promise.

Only one study focused on the prevention of at-risk youth involvement in organised crime. Drawing on and largely overlapping with the existing knowledge base from domains such as juvenile delinquency, key indicators of susceptibility to organised crime involvement include: criminality, poverty, location, truancy and trauma (Boulton *et al*. 2019). In an effort to supplement this knowledge with qualitative insights, Boulton and colleagues (2019) interviewed practitioners working with young people involved in organised crime. One of their main recommendations was to target resilience-building interventions at primary school aged children in high-risk neighbourhoods. Indeed, the importance of schools in both identifying potentially vulnerable pupils, and as a place of delivering interventions was emphasised, as was the central role of teachers in identifying trauma and facilitating support (Boulton *et al*. 2019).

In the field of human trafficking, a diverse range of interventions with differing objectives and target audiences have been developed. Many focus on raising awareness amongst different audiences, from the general public and front-line professionals in local authorities, health care, police and immigration officials, to those in at-risk communities, as well as the people representing the demand that underlies trafficking (Davy 2016; Van Dyke 2017). However, even with increased awareness of their rights, migrants often found it difficult to exercise these effectively in situations of power inequalities and unfavourable immigration frameworks, leading Zimmerman *et al*. (2021) to label pre-migration training programmes ineffective at protecting migrant women.

5.5.2 Context

The importance of context in the area of organised crime and trafficking is highlighted across multiple dimensions. Mapping the administrative structures within which each municipality operates is as important as understanding which organised crime groups operate in each area, and what crimes they are involved in.

[8] Money laundering is the term given to the process through which criminal proceeds are cleaned, thus concealing their illicit origins. In July 2021, the European Commission further updated its legislative initiatives against money laundering and the financing of terrorism.

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Responses to organised crime are often set out in national frameworks, but operate within the local governance structure, which can vary significantly between cities. National and municipal law enforcement agencies are likely tasked with joint operations, likely involving additional stakeholders. Clear lines of accountability between partners are crucial for successful intervention. This also applies to cross-jurisdictional cooperation, ensuring ownership of responsibilities between origin and destination countries cannot be disputed (Zimmerman *et al*. 2021).

In order to effectively target organised crime and trafficking, identifying the groups operating in a given locality is key. The nature of organised crime groups is not necessarily the same between countries, or between cities. As early as 2004, Nelen distinguished between the 'octopus-like' mafia syndicates in Italy, and the 'fission-and-fusion' networks operating in the Netherlands, highlighting the implications for enforcement if making erroneous assumptions without fully understanding the local problem. The group's structure also affects the effectiveness of enforcement strategies such as focused-deterrence (Felbab-Brown 2013).

Different groups are involved in different illicit activities, and establishing an accurate picture of the local problem will dictate how best to intervene. Port cities face an additional dimension in terms of policing an area often governed by multiple privately owned stakeholders (Sergi 2021).
Drug crime is often associated with increased levels of violence with competing groups vying for dominance. Living in neighbourhoods with active organised crime groups has been shown to increase the likelihood of involvement by young people, partly due to a lack of legitimate alternatives, or fear of repercussions by the groups if they refuse to participate (Boulton *et al*. 2019).

Finally, understanding which industries fuel the demand for and supply trafficked individuals will enable a more targeted intervention approach adapted to the local context (Cockbain *et al*. 2018). Accurate victim nationality profiles will also identify what conditions facilitate the problem. For instance, Caneppele and Mancuso (2012) observed changes in the victim profiles in Italy after Bulgaria and Romania joined the EU in 2007. In conclusion, in addition to having a clear understanding the local picture, the situation needs to be monitored to identify any changes so that policies and enforcement can adapt accordingly (Caneppele and Mancuso 2012).

5.5.3 Implementation

Understanding the local context is crucial to successful implementation. As Braga and colleagues point out in relation to focused deterrence strategies:

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> *'[T]he adoption of the focused deterrence framework requires local jurisdictions to conduct careful upfront research on the nature of targeted crime problems to customise a response to identified underlying conditions and dynamics that fits both local community contexts and the operational capacities of criminal justice, social service, and community-based agencies. The successful implementation of focused deterrence strategies requires the establishment of a "network of capacity" consisting of dense and productive relationships among these diverse partnering agencies.'*
>
> Braga *et al*. (2018: 241)

They go on to emphasise that implementation tended to fail in places without sufficiently strong networks in place (Braga *et al*. 2018). Though largely successful at reducing violence related organised crime groups in the United States, focused deterrence strategies and selective targeting strategies have proven more difficult to implement in other countries (Felbab-Brown 2013).

Across the literature examined, one of the most common issues raised is that of implementation failure (Levi and Maguire 2004), predominantly relating to the difficulties of multi-agency partnerships and information sharing. While good partnerships between law enforcement and NGOs can and do result in a more effective criminal justice response (Braga *et al.* 2018; Van Dyke 2017), many partnerships fall foul of differing expectations between partners, poor communication and sharing of information, to accusations of deceit between partners leading to withdrawal from the project (Boulton *et al*. 2019). Failure to properly implement interventions may result in counterproductive effects on the very individuals the programme was designed to protect (Davy 2016).

5.6 Cross-cutting Themes

In line with the synthesis discussed, governance and diversification of actors and transnational and cross-border themes featured heavily in the literature on preventing and reducing trafficking and organised crime, discussed in 87% and 73% of papers respectively. Three-quarters of the papers examined addressed at least two cross-cutting themes, governance and transnational themes discussed together most frequently. An overview of the distribution of cross-cutting issues is presented in Table 5.2.

Table 5.2: Cross-Cutting Themes Represented in the Review

Governance and Diversification of Actors	*Gender*	*Technology/Cyber*	*Transnational and Cross-border*
87% (13)	33% (5)	7% (1)	73% (11)

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It is not surprising that the transnational nature of organised crime is reflected in the majority of the publications included in this focus area. The cross-jurisdictional nature of organised crime creates problems around responsibilities, ownership, and different, sometimes incompatible priorities, agendas and legal frameworks. However, cross-border focused deterrence strategies have been implemented to disrupt the trafficking of drugs between the US and Mexico, with the aim of weakening the US logistical channels of the most notorious Mexican cartel, thus incurring huge financial losses in their former most lucrative market (Felbab-Brown 2013). However, Felbab-Brown (2013) warns that countries' national security and public safety interests need to be aligned if this strategy has any chance of working across borders.

Some of the same issues are found within a country's own borders, with overlapping responsibilities at different administrative levels, but a lack of clear ownership of a particular problem. Further extending said ownership to the private sector, typically not concerned with crime prevention (Levi and Maguire 2004) only further complicates matters. Information sharing can be the crucial component in ensuring the success of measures created in the public sector.

Criminal law and law enforcement is by its very nature reactive, and can be slow to adapt to technological advancements and the opportunities criminal groups seek to exploit. Organised crime has been adept at capitalising on new technologies and exploiting the changing face of how we engage in the online spaces, especially social media, to its advantage (Derenčinović 2019; Levi and Maguire 2004). Given the prevalence of cyber-attacks linked to organised crime, we were surprised not to find more written about this phenomenon. This may be reflective of the lack of academic research in the field, as well as our methodology focusing on reviews of research. Technological advances are also helping to secure vital infrastructure, for example, securing the ports via increased surveillance capacities and access control (Sergi 2021).

Finally, the gender focus is especially prevalent in the human trafficking literature, as the majority of victims are women (Caneppele and Mancuso 2012; Cockbain *et al*. 2018). Gender differences also play out in the type of victimisation, with females more often exploited for prostitution, compared to males in labour exploitation and forced begging (Derenčinović, 2019). In terms of outcome, Caneppele and Mancuso (2012) found that men were more likely to integrate back into the job market than women.

5.7 Remaining Knowledge Gaps and Barriers to Implementation

Over a decade ago, van der Laan and colleagues (2011) believed evaluations in the field of preventing and suppressing human trafficking were showing promise. Unfortunately, however, many of the issues remain today. The evidence base in the field of trafficking and organised crime,

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particularly in the area of modern slavery, remains weak, predominantly based on assumptions rather than evidence (Davy 2016). Cockbain and colleague's (2018) systematic review of European labour trafficking found much of the research to be exploratory, of poor quality, with few evaluations of interventions or assessments of the impacts of trafficking. Without accurate data reflecting the extent of human trafficking, accurate assessment of the effectiveness of anti-trafficking initiatives' ability to act as a deterrent are difficult to make (Van Dyke 2017). The same applies to organised crime.

Evidence of the effectiveness of interventions in the field of preventing and reducing trafficking and organised crime is difficult to come by, not least due to the hidden nature of these crimes (Such *et al*. 2020). As highlighted in other focus areas, defining adequate and plausible outcome measures reflecting the aims of the intervention is key. The focus on law enforcement has resulted in some key indicators, such as number of arrests, prosecutions or convictions, the number of groups disrupted, and the value of seized or frozen assets or commodities (Levi and Maguire 2004; Van Dyke 2017). Ongoing issues defining adequate measures and inconsistent definitions continue to hamper efforts of more insightful research in the field (Dugato *et al*. 2020). In order to be able to evaluate, need data. However, current data and collection measures are not fit for purpose (Cockbain *et al*. 2018; Van Dyke 2017). Human trafficking presents additional complexities, as numbers of victims and perpetrators are merely estimates, making reliable evaluations problematic (Caneppele and Mancuso 2012; Davy 2016). Cockbain and colleagues (2018) called for more quantitative research based on existing datasets by independent academic researchers, as well the creation of new pioneering data.

While outcome measures in prevention programmes can be difficult to determine, practitioners in one study identified so-called soft-outcome measures, changes in the individuals' attitude, behaviour, even appearance, indicative of increased resilience toward future involvement (Boulton *et al*. 2019). Further measures might include increased school attendance or legitimate employment (Boulton *et al*. 2019).

All stakeholders, be they governments, municipal actors, or practitioners, need to be aware of the importance of evaluation, and supported in their efforts to incorporate key indicators and outcome measures facilitating evaluation of programmes and interventions. In order to do this, data sharing agreements between agencies need to be created and honoured. However, privacy regulations may impede effective collaboration, even where all essential trust between partners exists.

Moreover, all evaluation findings, good or bad, should be disseminated to broaden the evidence base (Van Dyke 2017; Zimmerman *et al*. 2021), ultimately working towards supporting the individuals and communities affected by organised crime and trafficking. Not sharing evaluations

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hinders the evolution of the accumulated knowledge base, yet it is still rare for unsuccessful programmes to be reported, especially considering that NGO failures can result in a withdrawal of future funding (Davy 2016). In a notable exception, Zimmerman *et al*. (2021) present valuable insights into an ineffective intervention, through the theory-based realist evaluation lens, focusing on context and implementation failures.

Distinguishing between short, medium and long-term outcomes is critically important, with several studies emphasising this important distinction as being central to making relevant and valid assertions about a programme's effectiveness (Boulton *et al*. 2019; Davy 2016). However, long-term strategies are often hampered by political short-sightedness.

This *Review* only examined the knowledge base as published in largely scholarly journals and publications. Given the large volume of grey literature publications not included, this *Review* only represents the tip of the iceberg in terms of knowledge in the field. However, it is worth noting that much of the grey literature has been repeatedly criticised for its lack of methodological rigour, thus limiting any evidence-based conclusions about programme effectiveness. As Cockbain *et al.* (2018: 352) warn, 'the preponderance of grey literature raises concerns about the visibility, accessibility and quality of the evidence'.

5.8 Key Lessons

The review of the literature in the field of preventing and reducing trafficking and organised crime provides some important considerations for future work in the field.

Understanding and Responding to the Problem

- Law enforcement strategies should focus on reducing violence related to organised crime, as well as protecting state institutions from infiltration from organised crime groups (Felbab-Brown 2013).
- Organised crime groups are constantly adapting in response to changes in technology, legislation and demand for services, hence there is a need to monitor situations and adapt policies accordingly (Caneppele and Mancuso 2012).
- Research suggests a need to examine and understand the underlying drivers facilitating the trafficking of human beings - i.e. contributing industry sectors, to target responses – and to foster policies promoting inclusion and integration of marginalised communities, reducing their dependence on crime and the illicit economy (Felbab-Brown 2013).
- Cross-border problems require cross-border solutions. Cross-jurisdictional collaboration between origin and destination countries and cities helps us to further understand the underlying context driving the supply and demand of phenomena such as human trafficking, potentially enabling more effective measures to be implemented in response.

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The Importance of Partnerships

- Studies highlight the importance of multi-agency partnerships and inter-agency cooperation. Holistic responses are required to address the inherent complexity of the phenomenon of organised crime and trafficking. These are enhanced where a clearly defined framework of responsibilities and accountability between partners is adopted.

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6 Designing and Managing Safe Public Spaces

The following section presents an overview of the final IcARUS focus area relating to the design and management of safe public spaces, drawing on a review of the research literature and knowledge base. First, we provide a definition of the focus area and its rationale, before then going on to analyse the findings from the literature. Unlike the previous focus areas, which are all problem-based, this focus area has a decidedly place-based and spatial dimension, in which a host of different social problem may occur. Crime and insecurities are not evenly distributed spatially but can be concentrated in particular locations at specific times. Spaces can serve as neutral hosts to crimes and behavioural problems or may attract and/or actively generate them. Some places may be high crime 'hot spots', while other spaces may be fear inducing but suffer little actual crime. Moreover, urban public spaces, by their nature, represent a wide variety of different built environments designed for diverse uses. For the purposes of this *Review*, we have sought to delimit the scope of the analysis, so as to render it manageable and focused in its relevance and utility for the purpose of the IcARUS project.

6.1 Definition

The design and management of public spaces - regardless of their ownership or control - in ways that promote openness, accessibility, inclusivity and conviviality for all people and foster the actual and perceived safety of the public through proactive regulation, design and planning.

Public spaces promote open and freely accessible use regardless of their (private) ownership, management or control. Urban public spaces are important for cities as they represent places in which people come together, encounter differences and experience often fleeting social interactions (Barker 2017). They are also the places where people experience and make sense of urban security. The quality of public spaces is central to their vitality and people's use of them, as they represent key attractions for visitors, residents and other users of all ages and backgrounds. The importance of urban public spaces, not only for the prosperity of cities but also for both the health and wellbeing of individuals, groups and communities has been reinforced by the Covid-19 pandemic. This has also raised fundamental questions about how best to plan, regulate and manage urban spaces in the public interest. In the face of contemporary insecurities, striking a balance between managing public spaces as secure but also open to accommodate diverse use – including for example political protest and public expression - is a major task confronting municipal authorities.

Crime prevention strategies and urban security are two important issues within this project and are perhaps most visible in the design and management of public spaces. Focus will be placed on not only those policies, practices and interventions that actively seek to ensure the safety of the community, but also those that create the perception of safety to the urban community. This can

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be achieved through a variety of means including situational/environmental design, community initiatives and social interventions such as community clean-ups. The focus will be on physical spaces and the ways in which they are affected, influenced, or transformed by non-physical (virtual) technologies, interactions and spaces.

6.2 Overview of Literature: Trends and insights into design and management of public spaces

Over the last 30 years, there has been significant progress with regard to the design and management of safe public spaces. Across that time, there have be evolving developments and trends that provide insights into how crime prevention and urban security programmes have changed. For many decades, crime prevention fell solely under the responsibility of the police and resulted in police-specific responses, such as 'hot-spot' policing. In the later part of the twentieth century, there was shift from a purely police-focused approach to crime prevention to a wider community focused approach. This brought into consideration more comprehensive methods and problem-oriented processes to crime prevention research and implementation, incorporating welfare and community factors. By the 1990s, this trend had gained traction and approaches such as Crime Prevention through Environmental Design (CPTED) and Situational Crime Prevention became popular frameworks for municipalities and governments across the world.

Broadly speaking, the design and management of public spaces has changed significantly in the two decades since the start of the new millennium, notably in the light of the 9/11 attacks in the US and the subsequent attacks across European cities. These have led to shifts in how public spaces are secured and how risks and threats to public safety are conceived. Increasingly, European cities face significant challenges including terrorism and organised crime, but also incivilities, petty crime and most recently, public health risks, which all affect citizens' feeling of safety. These challenges undermine the vibrancy and security of urban public spaces and threaten the well-being of European urban populations. In the context of increased hyper-diversity, fears of immigration, growing economic and social polarisation, questions about how to ensure safety and simultaneously render public spaces welcoming to diverse users has become a major preoccupation of municipal authorities. It is recognised that public spaces are contested places where different and competing interests coexist and where security is but one imperative that sometimes collides with other public goods or private pursuits. The challenge is how public spaces, as places that accommodate and welcome a diversity of use, can remain liberating yet safe, welcoming and lightly regulated. Public spaces, after all, are crucial arenas in which encounters with difference are hosted and loosely connected strangers meet in mutual recognition within the cosmopolitan city.

The following section will discuss some of the unique characteristics of the prevention of antisocial and criminal behaviour within public spaces, as well as significant trends and within the literature and research relating to this field over the last 30 years.

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6.2.1 Prominent Crime Prevention Elements and Frameworks

Social and Community Measures

In providing an overview of crime prevention literature and trends concerning the design and management of safe public spaces, an initial definitional challenge is differentiating between those social and community measures introduced into public spaces that have no explicit crime prevention or security rationale and those that have a narrower security and crime focus. The former may have indirect benefits for safety, perceptions of security or crime prevention but have wider primary rationales and driving logics that relate to social and community improvement or urban development strategies. For the purposes of this Review, by necessity we have focused on the narrow place-based interventions with an explicit security rationale. We discuss the challenges of place-based versus problem-based at a later point in this section, but broadly speaking social and community measures typically operate on a community/targeted or individual/indicated level, which can prove challenging in regulating public spaces. In the course of our *Review,* we did not encounter any social or community measure specifically targeting safety in public spaces, resulting in our minimal engagement with these types of prevention mechanisms and interventions.

Opportunity Reducing Measures

The majority of the crime prevention literature relating to public spaces falls within the category of opportunity reduction measures. These have traditionally been physical in nature, though over the course of the development of various framework and approaches there has been a shift toward including non-physical elements and mechanisms. These major shifts include the introduction and widespread use of Crime Prevention Through Environmental Design (CPTED) - originally developed by Jeffery in the 1970s - combined with elements from the work of Jane Jacobs (1961) and Oscar Newman (1972), which has evolved over time to its current form (Davey and Wootton 2016). The current CPTED framework comprises five elements, incorporating: physical security, surveillance, movement control, management and maintenance and defensible space. At the time of its development CPTED presented a unique model which considered additional factors besides simply physical factors or elements, and instead provided a framework which incorporated a multidisciplinary perspective (Mihinjac and Saville 2019). The use of CPTED had become widespread by the mid-2000s, being used in numerous counties, and endorsed by the European Union through its European Committee for Standardization, which sought to provide a standardised handbook for EU members of CPTED (Davey and Wootton 2016).

Additionally, Situational Crime Prevention (Theunissen *et al*. 2014), originally developed by Ronald Clarke in the 1980s while Head of the British Home Office Research and Planning Unit became increasingly influential. SCP seeks to identify the proximate situational properties or attributes that allow crime to occur. It posits measures directed at highly specific forms of crime that involve the

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management, design or manipulation of the immediate environment so as to reduce the opportunities for these crimes to occur (Clarke 2009). According to Clarke, SCP offers a 'framework for some practical and common sense thinking about how to deal with crime' (1995: 93). In its original formulation SCP was intended largely to be used for property crimes and highlighted 16 prevention techniques. Subsequently, this was expanded to the current model of 25 techniques organised under five categories of: increasing the effort, increasing the risk, reducing the reward, reducing provocation and removing excuses (Clarke 2009; Freilich and Newman 2017). Situational prevention has been an influential and versatile prevention framework, whereby individual techniques can be adapted to specific problems, local contexts and particular needs (Freilich and Newman 2017).

Likewise, insights from 'routine activity theory' (Cohen and Felson 1979) – which sought to highlight the temporal and spatial conjunction of a suitable target, a likely offender and the absence of capable guardians - came to influence the growing focus on the spatial attributes, architectural features and geographical distribution of crime, all with significant implications for the design and management of public spaces. Elements of SCP, routine activities and CPTED overlap in their various frameworks constituting a broad constellation of ideas and techniques that have come to inform the work of urban planners, municipal authorities and police architectural liaison officers. Additionally, the design and regulation of public spaces has benefited from a cross-fertilisation and transfer of strategies first implemented in privately-owned open spaces – shopping malls, amusement parks, recreational facilities, etc. - where commercial logics frequently take precedence over overt securitisation.

6.3 Typology of Interventions

The design and management of public spaces in relation to urban security and the prevention of criminal activity or behaviour represents a wide range of tactics, strategies and interventions. The interventions discussed in this section are classified and subsequently analysed by the most common manner in which they seek to address forms of prevention. This includes: (1) physical changes to the environment; (2) surveillance or monitoring strategies; and (3) managerial and design strategies.

- *Physical modification to the built environment*: this refers to when physical elements are added or removed for the purposes of seeking to prevent crimes and do constitute a larger prevention strategy. Examples might include the additional of additional streetlight, or public-use emergency alarms.
- *Surveillance and monitoring strategies*: Interventions or mechanisms which make use of in-person or technological surveillance to monitor (actively or passively) public spaces for the purposes of crime prevention.

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- *Management and design strategies:* this refers to crime prevention strategies which seek to utilize a managerial or design-based strategy to prevent crimes. These strategies may include multiple components (including a mix of both physical and/or surveillance elements) to reduce or deter antisocial or criminal behaviour in public space.

Table 6.1: Included Studies

	Authors	Title	N=
1	Bogar and Beyer (2016)	Green Space, Violence, and Crime: A Systematic Review	10
2	Fileborn and O'Neil (2021)	From 'Ghettoization' to a Field of Its Own: A Comprehensive Review of Street Harassment Research	182
3	Lorenc *et al*. (2013)	Environmental interventions to reduce fear of crime: systematic review of effectiveness	23
4	Welsh and Farrington (2009)	Public Area CCTV and Crime Prevention: An Updated Systematic Review and Meta-Analysis	22

6.3.1 Programme Characteristics

The *Review* found a surprisingly low number of articles and literature that provide a review of crime prevention measures or interventions concerning the design or management of public spaces. In total, four articles met our inclusion criteria, and originate from a 13-year period (2009 to 2021). Overall, the most prominent studies considered CPTED, while additional studies considered various aspects of design or managerial elements. As discussed previously, we have provided categories of types of prevention outcomes (physical, surveillance and managerial), but have also included two separate measures regarding how public safety is considered and targeted. These two measures represent the main ways in which the safety of public spaces is considered, researched and discussed, and demonstrates vastly different approaches not only in research design and implementation, but also outcomes. Within the next section we will examine and discuss the three subcategories and how this relates to the current state of designing and managing safe public spaces.

Table 6.2: Public Spaces Review Articles

	Criminal Acts	Perceptions of Safety
Physical		
Surveillance	Welsh 2009	
Managerial	Fileborn 2021	Bogar 2016
Mix		Lorenc 2013

6.3.2 Physical Modifications to the Built Environment

As can be seen from Table 6.2, we did not find any reviews of solely physical changes to public spaces for the purposes of crime prevention. Many of the studies which are included discuss physical

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changes, but within a specific opportunity-reducing framework such as CPTED or SCP. It was felt important to draw attention to the lack of literature that focused solely on physical modifications as a means of demonstrating the clear shift in research and implementation of crime prevention measures to a more holistic approach that incorporates design and management elements of integrated urban security strategies.

6.3.3 Surveillance

There was only one study that discussed the use of Closed-Circuit Television (CCTV) specifically as a crime prevention mechanism, and was conducted by Welsh and Farrington (2009). This review was conducted primarily in the US and Western European countries and resulted in 44 evaluations in which CCTV was a main focus of study. Of the 44 evaluations, 22 are relevant for the purpose of this *Review*, as they focused on city and town centres within the US, UK, Sweden and Norway. The most common form of monitoring was active monitoring, in which a person watches live footage and responds in real time, the average follow-up period was 15 months and there was little evidence of displacement (Jeffery 1971; Welsh and Farrington 2009). Overall, results indicated that CCTV provided a small reduction of crime in city and town centres.

6.3.4 Managerial (Design)

Within this section, we explore the literature that focuses on manipulating or considering managerial/design elements for the purposes of crime prevention in public spaces. First, we examine those articles that attempt specifically to reduce criminal acts in public spaces. This is followed by consideration of articles that seek to measure, better understand or increase perceptions of safety in public spaces.

Criminal Acts

Fileborn and O'Neil (2021) sought to provide a state of the art review concerning global knowledge and research pertaining to street harassment and identified 182 studies in the process of their review. While this article did not seek to evaluate or determine specific crime prevention outcomes, it provided a review of up-to-date literature concerning street harassment and demonstrated further need for research within this field. Overall conclusions from this article indicated that 'very little scholarship to date has considered how street harassment might be prevented or redressed outside of the criminal justice system' (Fileborn and O'Neill 2021).

Perception of Safety

Perceptions of safety plays a vital role of creating a safe public space, and in producing a public space which seeks to be used safely and enjoyably by the wider community. The following article is concerned with how perceptions of safety can be achieved or improved upon so as to create a welcoming public space for citizens. Bogar and Beyer (2016) provided an examination of green

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spaces violence and crime, which included two studies that measure pre- and post- greening of vacant lots. Additional studies were concerned with existing greenery and proximity and as such are not directly relevant for the purposes of this *Review*. The two included studies were both set in the USA and measured crime rates and perceptions of safety prior and post greening of vacant lots and ultimately concluded that the greening of vacant lots was successful in reducing gun-related crimes and increasing perceptions of safety and general wellbeing of the community (Branas *et al*. 2011; Garvin *et al*. 2013).

6.3.5 Mix

The final article provided a wealth of information pertaining to the use of environmental interventions to reduce crime (Lorenc *et al.* 2013). This systematic review focused on a wide range of activities and spaces, but did examine three relevant areas, which include 16 studies relating to street lighting (Physical), six studies relating to CCTV (Surveillance), and one study relating to small-scale environmental improvements in public areas (Managerial/Design). The street lighting studies were mainly conducted in the UK and sought to measure fear of crime following street lighting improvements, though one study considered the change from traditional 'yellow sodium lighting' with 'whiter light'. Ultimately, the authors concluded that 'evidence regarding lighting is rather mixed. While uncontrolled studies showed reductions in fear, these were generally not replicated in more rigorous studies, although some of the latter studies did show some positive effects' (Lorenc *et al*. 2013). The CCTV studies comprised six studies, of which five were focused on city or town centres. Of the relevant five studies, all were based in the UK and represented a mix of controlled and uncontrolled studies and ultimately found that 'evidence tends to show that CCTV is not effective in reducing fear of crime' (Lorenc *et al*. 2013). The managerial and design-based study was based in the US and related to the addition of gym equipment to public parks. The study found that there were 'significant improvements in at least some fear of crime outcomes… but no significant change in feelings of safety' (Lorenc *et al*. 2013).

6.4 Discussion of Characteristics, Mechanisms and Limitations

6.4.1 Unique Characteristics of Public Spaces

The design and management of safe public spaces presents some unique difficulties in seeking to implement crime prevention mechanisms and strategies. The following section highlights some of the more prominent issues and acknowledges how this may impact research and implementation within municipalities.

Place Not Problem

The first and most prominent issue concerns the fact that the design and management of safe public spaces is a place-based issue, not problem-based. When considering the other three focus areas (preventing juvenile delinquency, preventing radicalisation leading to extremism and preventing

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organised crime and trafficking), they all represent specific issues of behaviours that are targeted. In contrast, creating and maintaining safe public spaces comprises a place in which a multitude of antisocial or criminal behaviours may take place. As such, it presents unique challenges and considerations. Much of this focus area has been dedicated to unravelling the complexities associated with the ever-present tensions of safety and accessible use of public spaces by the wider community.

Multifaceted Dimension of Public Spaces

Within the literature search and review generated in this section, a large portion of results concerned the study of green spaces in relation to violence or crime, and generally focused on a public health approach to the overall wellbeing of those making use of public spaces. In our consideration of this we placed more focus on specific crime prevention interventions or mechanisms, rather than engage with a broader concept of safety in public spaces. This was partly due to research constraints, but also a reflection of the complexities of such an interdisciplinary area of study. As we have discussed, the design and management of public spaces has shifted to try and provide a more comprehensive understanding of the notion of 'public safety'- including research which considered not only the safety but specifically the physical and mental health of the public (Cozens 2002).

Evaluation and Assessment

In seeking to determine actual and perceived notions of public safety, the use of assessments or evaluations have become common practice in many municipalities and governments. While traditionally crime prevention was solely a policing matter, by the early 1990s the field (including the safety of public spaces) had shifted to be considered as a multidimensional issue (Crawford and Evans 2017). Many cities started to make use of safety evaluations as a way to gain feedback directly from communities and help identify important issues. This moved the burden of crime prevention from purely a policing focus and opened the issue to include other departments and organisations, with the result of frameworks such as CPTED and SCP.

Measures: Crime Rate vs Perceptions of Safety

Within our literature review we encountered many reviews relating to urban security and crime prevention in public spaces, but much of this literature considered the measure of urban security in different ways. For example, some looked simply at the crime rates pre- and post-intervention and determined their conclusion based on any significant increase or decrease (or lack thereof). This measure ties into general safety rate, and typically is a main measure for police and government officials when allocating resources and personnel. In contrast, much of the literature also attempted to measure perceptions of safety – specifically how safe a community felt using public spaces, even if this differed from statistical crime rates. This presents a contrast between quantitative and

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qualitative outcomes regarding urban security prevention measures within public spaces and creates a disparity when comparing data or results.

Additionally, when considering public spaces, we must first understand the priorities of a public space. Is safety the highest priority for a space, or instead the ability of those within the community to engage and enjoy the space? These are not universally known answers, but instead something that communities themselves must decide. In the decades since the 9/11 terrorist attacks, many governments and communities have sought to balance these two priorities in a more effective manner. In many cases, research has demonstrated that increased security elements (such as bollards, CCTV, or additional police patrols), does not increase perceptions of safety, but instead increases fear or anxiety within a public space (Weisburd *et al*. 2017). Alternatives to such tactics can include ways in which authorities can reassure those within public spaces of safety and security without negating enjoyment of such spaces – such as environmental crime prevention through design.

6.4.2 Mechanisms

Within this section, we have sought to provide a brief and succinct overview of the evolution and current state of designing and managing safe public spaces. The following sections will discuss and analyse prominent crime prevention mechanisms which have been identified through the course of our *Review*.

Crime Prevention Through Environmental Design (CPTED)

Currently, CPTED seems to be the most prevalent framework employed by municipalities for the purposes of crime prevention within public spaces. While this is not necessarily heavily reflected in the dataset and analysis provided above, a considerable amount of the excluded literature concerned CPTED, including insightful research, such as Davey and Wootton (2016) who provide a helpful overview of CPTED adoption and implementation across Europe.

Situational Crime Prevention (SCP)

Situational Crime Prevention, as discussed previously, is a framework comprised of 25 techniques that seek to reduce opportunities to engage in criminal or antisocial behaviour. As this framework consists of numerous individual techniques, there are many occasions wherein municipal prevention strategies have incorporated situational elements as needed for the particular context. There is considerable overlap between CPTED and SPC, but for this *Review* we are identifying it as a separate mechanism due to the fact that specific situational elements have been used in prevention research and implementation. In a recent paper by Douglas and Welsh the authors provide a 'systematic review of the effects of place mangers on crime in public and private spaces' and ultimately conclude that place managers can be effective situational techniques in helping to

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prevent crime (Douglas and Welsh 2022: 1). In reference to place mangers, they discuss the opportunities in which actors already engaging in a managerial role within the community (for example bus driver), can seek to promote prevention measure in their daily activities. While this study was not able to be included in the dataset for this focus area, it demonstrates the useful manner in which such situational measures can be incorporated into crime prevention strategies within municipalities.

6.4.3 Limitations

In the course of conducting a review of the current state of designing and managing public spaces, we sought to narrow what is a large and diverse field in order to achieve our research aims. As a result, we had to limit our search parameters to a narrow scope and were unable to address some prominent topics within the study of safe public spaces.

Scope

Because of the broad nature of this *Review*, it is evident that certain relevant areas of safety and security research were omitted from our search results. This is likely due to highly specific and technical terms for numerous areas of study – for example, we had expected a higher level of literature that discussed public spaces in reference to terrorist attacks. In the course of sorting, coding and analysing the data it became evident that this particular area of research made use of specific terms (for example the term 'soft targets' to refer to areas of large civilian congregation) and as such was not included in our search results. The search terms used for this focus area were more general in nature, so as to try and capture a wide variety of typologies and literature, but with the offset of overlooking more focused areas of research.

Social Exclusion

The issue of social exclusion of certain populations from accessing public spaces is an additional topic which unfortunately could not be discussed in depth in the course of this Review. In considering the design and management of safe public spaces, a main priority which is often considered is how to ensure that certain populations or marginalised groups are not barred or discouraged from engaging with public spaces. This includes aspects of accessibility, which proved to include a large and interdisciplinary area of research, of which it was difficult to extract relevant data. This is an area in which the balance of safety and engagement with space becomes especially relevant, especially when considered in the more holistic approaches of design and planning prevention strategies.

Sustainability and Natural Disaster Management

The topic of sustainability represented too large an area of research to be included in our *Review* but is a topic which is at the forefront of many urban strategies. Developing cities to be more

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sustainable includes considering new and eco-friendly alternative to traditional forms of policing and security. As it is clear that sustainability has become a high priority for many communities and cities, this is an area of research which will likely prove to be more relevant to the urban security strategies in future research and implementation. Natural disaster management, as we indicated previously, also featured an amble volume of research, but had to be excluded due to its diverse and sizable nature. It also of note here that the issue of climate change, and the increased likelihood of atypical disasters occurring in non-traditional locations is an area of research which will likely closely align with urban security strategies.

6.5 Cross-Cutting Themes in Relation to Priority Area

Within the consideration of the design and management of public spaces, there are two cross-cutting themes which were most prominent within this focus area.

6.5.1 Gender

There is a large cross-sectional volume of literature that addresses women's perception of security and safety within public spaces. In this subset was also a growing volume of research dedicated to LGBTQ (including trans and non-binary persons) who are targeted in public spaces, and feelings on insecurity. While we did not have scope to address these complex issues, it is important to note that there is a significant portion of literature which relates to various elements of gender-specific access to public spaces, and their perceptions of (and actual) safety in such spaces.

6.5.2 Cyber/Tech

There was a considerable amount of literature which focused specifically on 'smart cities' and the various technological elements which can contribute to crime prevention within public spaces. This often tied into discussion concerning equal access to public spaces, but also ways in which access can be safety maintained for all persons (including vulnerable populations). There was surprisingly little research within the dataset which discussed the use of drones in monitoring and policing public space. We expect this is an area which is already being utilized for the purposes of crime prevention but might perhaps lack significant systematic or meta-review research literature at the present moment.

One finding that was ultimately excluded from the review dataset was Solymosi and colleagues' (2021) article which considered the use of app-based and crowdsourced methods to measure perceptions of crime in a place-based approach. This article examined 27 studies from a wide range of countries including the USA, UK, Italy, Hungary, Czech Republic, Finland, India, Brazil, Australia and Columbia. These studies included a range of self-built mobile apps or websites and already existing apps. Included studies used a variety of methods to measure fear of crime, or perceived safety and - depending on the application or website - could provide real-time information. Ultimately, they concluded that 'app-based and crowdsourcing measure of fear of crime capture

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more precise spatial and temporal data alongside auxiliary information about the individual and environment' (Solymosi *et al*. 2021). While there may be a potential bias in usage (for example, those without access or ability to use such technology), it does represent the possibility of real-time feedback directly from community members presents an effective and low-cost option for producing feedback and problem-solving approaches for public spaces.

6.6 Key Lessons

- Much of the current public space literature either presents a very narrow focus for targeting specific behaviours and the immediate circumstances in which they occur, or entails a broad urban strategy that includes safety of public spaces as elements nested within a much wider overall framework. Strategies and programmes with other motivations, priorities, rationales and justifications may nonetheless impact positively on perceptions of safety and experiences of security. As such, consideration should be made as to how strategies pertaining to safety within public spaces are determined, as well as how they best fit the local contexts and address local issues.
- Crime prevention as a field has historically been the responsibility of policing, but in recent decades it has shifted to include a more comprehensive approach. In developing and implementing crime prevention mechanisms and strategies within public spaces, the need for a detailed and focused planning process – based on good quality scanning and analysis - is vital to gain valuable insight from numerous departments, stakeholders and local communities.
- Effective feedback and assessment from the community is a necessary element of any crime prevention strategy or initiative to improve the design and management of safe public spaces. Our findings indicate that many cities are employing community-wide safety assessments by which local citizens provide direct feedback concerning the safety and security of their neighbourhoods. Such assessments, sometimes complemented by open-source data, offer valuable insights into communities' perceptions and priorities. It also requires authorities to consider the diverse composition of designated communities, specify the desired goals and outcome criteria and clarify the manner in which to use and share such assessments.
- From our findings, it is clear that crime prevention strategies for public spaces are more effective than simply implementing formal prevention elements. Consideration should be given to community-based strategies that decentre the police and law enforcement and engage informal actors, civil society mediators and forms of persuasion, self-regulation and capacity building aligned to local contexts and needs.
- One of the main prevention elements specifically identified in this focus area was the use of CCTV, but findings from this *Review* indicate mixed outcomes. Research suggests that CCTV has been implemented too indiscriminately with insufficient regard to the benefits, outcomes, costs and their sustainability within specified contexts. When used as an independent prevention

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element, CCTV seems to lack any particularly effective results, but can be effective when included in a comprehensive prevention strategy.

- Assessments and evaluations of public safety rates and perceptions are not standardised or conducted regularly and therefore create difficulty when measures are inconsistent or fail to consider a wide variety of safety elements. Increased use of safety evaluations and assessments are growing in popularity, but often exclude certain segments of the population. Use of mobile-app and web-based programmes offer novel and low-cost approaches to engage large and diverse populations, but also present possible population bias.
- The Covid-19 Pandemic has brought public space issues to the forefront of urban strategies, especially in light of the increased use of public spaces - specifically green spaces - during the various lockdowns that were implemented internationally. There has been significant research into the monitoring and regulation of public spaces after this renewed popularity and use of public spaces, but much of this research was not included within this *Review.*

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7 Key Lessons from the Accumulated Knowledge Base

In this section, we bring together some of the salient, recurring themes and learning that cut across the different focus areas outlined and discussed in the earlier sections, as well as urban security developments more broadly. In doing so, we illustrate these by drawing both on the interviews with international experts and examples from the six IcARUS partner cities – Lisbon, Nice, Riga, Rotterdam, Stuttgart and Turin - presented briefly as case studies in side Boxes. We also provide specific consideration of the four cross-cutting themes that animate the IcARUS project: (1) governance and diversification of actors; (2) technology; (3) gender issues; and (4) transnational and cross-border issues.

7.1 Key Trends in Urban Security

The last 30 years have seen considerable developments and advances in our understanding of urban security and the effectiveness or prevention strategies in European cities, from which we can draw a number of broad trends. These have played out differently across the various focus areas discussed in the preceding Sections (3-6) and within different jurisdictions. Here we draw together the broad, cross-cutting developments across time.

7.1.1 Physical Space Management

- The growing awareness of 'up-stream' design thinking and early interventions that seek to anticipate harm and pre-empt criminal opportunities by effecting social and technological change rather than retrofitting solutions after the event.
- Prevention has played a significant role in the decrease in aggregate crime rates in relation to traditional property and public crimes. Despite this 'success', crime prevention remains under-resourced and poorly implemented.
- The growing recognition that design modifications to the built environment can foster reductions in the incidence and fear of crime - notably the influence of the principles of Crime Prevention Through Environmental Design (CPTED) of: natural surveillance; natural access control; territorial reinforcement; maintenance and management.
- Appreciation that overly crude environmental design and 'defensible space' with overt surveillance as deterrence, pay insufficient regard to aesthetics and the impact on public perceptions, hastening a trend towards a 'process of naturalisation', whereby regulation becomes embedded into the physical infrastructure and social routines in ways that are less noticeable or threatening
- Recognition that the incidence of crime can be affected by situational measures through modifications to the immediate physical environment in which crimes occur.

7.1.2 Early Intervention and Developmental Prevention

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- Increased acknowledgement of the importance of early childhood development, adverse childhood experiences and trauma in influencing subsequent individual behaviour and future trajectories of vulnerability, victimisation and offending, as well as lifelong health and wellbeing.
- A greater awareness of the harmful effects of criminal justice responses and interactions with police and penal institutions, particularly for young people, which has encouraged forms of diversion.
- A recognition that unintended consequences can arise from well-intentioned interventions and, hence, the need to ensure the parsimony of interventions and the guiding principle of 'do no harm'.
- The growing emphasis on the rights of children and young people and ensuring international standards and safeguards to ensure the application of those rights.
- Significant declines in the numbers of young people drawn into the criminal justice systems and in youth offending, as well as young people engaging in other behaviours – i.e. drinking, drug-use and smoking.
- The growing importance of gender in framing urban security in terms of both the lived experiences of security and the production of safety, notably in relation to the use and quality of public spaces and domestic abuse as a community issue. In many ways, the prevention of juvenile delinquency has been dominated by the treatment and study of masculine behaviours.

7.1.3 Design

- The growing importance of identifying the theories of change that inform how specific mechanisms trigger the anticipated outcomes; to provide a better understanding of how an intervention works or is intended to work.
- A shift from a focus on identifying single causal factors, and the mechanisms designed to address these, to the more complex interactions and interdependencies between multiple factors and mechanisms.
- An analogous shift towards combining proximate or 'near' (situational) causes with more distant or 'deep' (environmental, social and structural) causes as well as multi-systemic interventions that combine individual, family, peer and community levels.
- A trend beyond 'what works' evaluation design that sought to register successful outcome effects – through the conjunction of mechanisms with outcomes – towards an investigation of why particular interventions work, for whom and under what circumstances, with greater regard accorded to effects of implementation and account taken of contextual factors.
- The significant decline in aggregate crime rates – notably in traditional offences - and the fact that this is mirrored across jurisdictions and therefore not country-specific in terms of causes.
- Despite an overall decline in levels of crime, there is growing evidence of a concentration of victimisation and offending amongst certain groups in the population and within certain

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(geographical) areas and neighbourhoods in ways that compound disadvantages. The unequal distribution and impacts of crime, risk and vulnerability have thus become more marked and entrenched.

7.1.4 Process and Implementation

- A gradual recognition of the importance of applying 'process models' of problem-solving methods that tailor responses to the context of local problems and populations rather than 'off the shelf' universal solutions.
- The recognition that in its design and implementation urban security demands collaboration through multi-stakeholder responses and that the police alone cannot prevent crime.
- Despite globalisation, locality, 'place' and context have become more, not less, important. Global forces and the salience of locality have become increasingly mutually interdependent.
- A growing resort to administrative regulation and civil laws (or quasi-civil laws such as anti-social behaviour regulation in the UK), as means of effecting and implementing crime prevention and urban security – in part recognition of the relative impotency and inadequacies of punitive criminal responses.
- A shift from a narrow focus on crime reduction to community safety, 'urban security' and harm minimisation that incorporate public perceptions of insecurities, well-being and lived experiences, as well as public trust in authorities – in part stimulated by victimisation survey data.
- Increased recognition of the need to engage populations that are the targets of interventions as active co-producers and agents of change rather than as passive recipients of services.
- Recognition of the effectiveness of informal responses that enlist community engagement and citizens' capacity for self-regulation through persuasion and voluntary compliance – and the corresponding limits of 'command-and-control' based sanctions.

Figure 7.1: Stuttgart's Respect Guides
Stuttgart's *Respektlotse*n (Respect Guides) programme highlights and acknowledges the interconnectedness of different urban security concerns. It is working to create safer and more enjoyable public spaces which facilitate co-existence, demonstrating the importance and value of incorporating human solutions. By using informal actors who are sensitive to the local context, Respektlotsen encourage youths to self-regulate their behaviour, as well as opening avenues of communication with other users of public spaces, fostering integration.

- The increasing appreciation of the need for rigorous evaluation of interventions, as a mechanism of accountability, to help strengthen institutional development and to inform accumulated knowledge and evidence.

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- The greater importance of victimisation surveys as an alternative (and often more robust) source of information about the nature and extent of crime and harm, which disrupts the erstwhile monopoly of the police as gatekeepers of crime data.

> *'I think symbolically when you do a victimisation survey, you break the monopoly of the police on the topic. In the old days, they were the ones who collected the statistics and manipulated them. So, it was totally within their universe. When you have victimisation survey data, you changed the rules of the game... So, I see the victimisation survey, more than I did in the past, as an extremely important tool in the democratisation process.'*
>
> Jan van Dijk, University of Tilburg, Interview

- The growing focus on victims rather than offences and offenders has highlighted the concentration of harm (through multiple and repeat victimisation as opposed to the prevalence or incidence of crime) and provides an effective and socially justifiable way of directing crime prevention efforts by integrating it with victim support.
- The shift and migration of crime from physical space to cyberspace presents new challenges given that potential victims are more abundant (easier to find given the reach of the internet) and policing/law enforcement remains territorial.

7.2 Key Tensions in Urban Security

Similarly, the research evidence base suggests a number of recurring themes and dynamic tensions that persist across time and across jurisdictions, albeit with slightly different practical expressions and implications.

A central challenge in synthesising the knowledge base is that most of the research is written by researchers for other researchers and tends to focus on exploring narrow questions of internal validity, often to the exclusion of wider contextual factors (external validity) that are of interest and value to policy-makers and practitioners. Evaluation of the effects and impacts of preventive interventions remain patchy, limited in rigour and frequently under-resourced. This contrasts with the relatively greater evaluation of offender-oriented, tertiary, treatment programmes. There are evident difficulties associated with evaluating prevention as a 'non-event'. It is both difficult to evaluate a non-event (except in so far as comparisons can be drawn with a control sample that has not benefited from the intervention) and difficult to communicate the success of prevention (i.e. something that did not happen).

Crime and security problems are not static or constant, but rather innovate and evolve in response to social and technological change. Despite a greater recognition that the levers of crime and prevention lie outside of the criminal justice system and punitive approaches, criminal justice responses continue to dominate policy and investments in resources.

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The evolving dynamic of crime and security

'Too few people in policy or practice acknowledge the fact that crime and security are co-evolving in an arms race: they maintain a static perspective and devote insufficient attention to the strategic imperative of out-innovating adaptive offenders against a background of changes in technology, cultural or business practices, etc., which often favour crime and render what works now, ineffective in future.'

Paul Ekblom, University of the Arts London, Interview

Urban security demands the engagement of multiple stakeholders where advantage derives not simply in the combination of perspectives, resources and skills, but also in framing and shaping problems and methods differently, nonetheless where these same differing cultures, values, interests and working practices can foster conflicts.

The collaboration paradox

'The possibility for collaborative advantage rests in most cases on drawing synergy from the differences between organisations, different resources and different expertises. Yet those same differences stem from different organisational purposes and these inevitably mean that they will seek different benefits from each other out of the collaboration'.

Huxham and Vangen (2005: 82)

Enduring challenges pertain to the pursuit of multi-stakeholder urban security networks through horizontal exchanges of shared information, knowledge, resources or other transactions that cut across vertical *intra*-organisational priorities, which pay scant regard to the task of managing *inter*-organisational relations. An integrated approach to urban security is weakened by tensions between national and municipal authorities with regard to jurisdiction, competencies and responsibilities, as well as by conflicts – 'turf wars' - between central government departments operating as silos.

'Multi-sectoral governance requires collaboration, performance indicators and outcomes. National systems like policing or education are siloed, whereas local government is much closer to the outcomes and have a joint interest in a city or neighbourhood being better.'

Irvin Waller, University of Ottawa, Interview

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Data sharing and data linkage remain some of the most intractable and contentious aspects of urban security practice. A pervasive and deeply ingrained reluctance to share information between agencies persists, informed by technological, legal, organisational and cultural barriers to data exchange.

An uneven trajectory in the political fortunes of crime prevention influenced by exceptional events and the vagaries of political priorities, which has seen the ebb and flow of investments in prevention with political changes and a shifting focus as priorities change. Narrow political horizons and short-termism serve to undermine the necessary investment in long-term preventive solutions and a fundamental shift away from traditional punitive responses to crime and harm. There remain enduring and entrenched (political) demands for uniform and eye-catching solutions – 'silver bullets' encouraged by the rhetoric of 'what works' – that can be applied, almost regardless of context or the nature of the specific problem.

Despite all the organisational and technological developments, which should have enabled greater progress, a problem-oriented approach (first elaborated in relation to policing by Herman Goldstein in the late 1970s) remains stubbornly unfulfilled (see Bullock *et al*. 2022). Cultural obstacles to fostering change at the frontline are substantial, notably within policing.

The (non-)implementation of a problem-oriented approach

'I still think that our efforts to understand local problems and draw on evidence in order to try and figure out strategic ways of responding is not really functioning as I'd hoped it would [over 25 years ago]. I'm pleased that it's still happening after a fashion, but disappointed, it's been so slow and disappointed that the development has been so uneven. I would have hoped for steady progress. If you think of the literature on diffusion of innovation you would expect there to be a slow take up, for things to take place slowly, then to be a rapid increase and then to plateau as adoption becomes almost universal. That has not happened in problem-oriented policing.'

Nick Tilley, University College London, Interview

Trust is a vital ingredient in lubricating implementation. Inter-organisational and inter-personal trust relations as well as public trust in authorities are vital to ensure the effective implementation of urban security interventions. Trust fosters co-operation, inter-dependence and risk-sharing which facilitate social interaction and innovation. Trust in authorities, organisations, people and systems - including security technologies - is fragile, easily broken and hard to renew or generate afresh. Trust is inevitably easier to destroy than it is to generate. As Baier (1994) suggests, 'trust comes in webs, not in single strands, and disrupting one strand often rips apart whole webs'. Trust is more likely to be noticed by its absence. By contrast, mistrust in authorities and systems erodes the vital flow of information, undermines commitment and serves as a barrier to effective implementation. Some

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forms of security can institutionalise distrust by disrupting normal social relations. Hence, the experience of security usually rests upon 'a balance of trust and acceptable risk' (Giddens 1990: 36).

7.2.1 The Concept of Urban Security

Urban security concerns factors that extend beyond crime reduction to incorporate public perceptions of insecurities, well-being and lived experiences. Reductions in crime may not foster or lead to reductions in insecurity and may relate to public (dis)trust in formal institutions' capacity to ensure safety. Urban security may be intimately related to wider forces of economic insecurity, uncertainty, social polarisation and distrust in political institutions.

Security is but one imperative that sometimes collides with other public goods or private pursuits. There has been a tendency to over prioritise security as against other benefits, uses and values of public spaces – social, cultural, environmental, educational and health-related – resulting in the over-securitisation of public spaces. Aesthetics and public sensibilities matter, given that security interventions can foster insecurity rather than public reassurance. One of the ironies of such quests for security is that in their implementation they may foster perceptions of insecurities by alerting citizens to risks, heightening sensibilities.

A tension exists between identifying the role of social, educational and wider economic forces in fostering crime and insecurity and in justifying social policies in terms of their crime preventive potential or implications. The danger is that crime and insecurity become organising frames in the exercise of authority and in legitimising interventions that have other motivations.

7.2.2 The Ethics of Early Intervention and Measurement

The reported outcome from interventions operating multiple mechanisms is inevitably a ***net effect***, which comprises a complex mix of the balance between non-effect, positive effect and possible negative effects. There remain stubborn debates about the preference for universal provision or targeted interventions – i.e. 'primary' versus 'secondary' prevention. Targeted interventions focused on risk factors are justified in terms of effectiveness, as they target those people/factors most likely to effect change, reducing the chances of 'false positives', and cost efficiencies as they target need in more limited ways, reducing costs. Targeted prevention initiatives raise concerns about the stigmatising potential and labelling implications of associating specific people or places with crime. In some countries, there are strong cultural and political presumptions in favour of universal preventive services for young people justified on the basis of children's existing educational or social needs and problems, rather than future risks of criminality. Targeted interventions based on risk assessments can be more effective from a cost basis but also suffer from inaccurate predictions of subsequent crime/criminality, such that they can herald intervention where negative outcomes would not actually have occurred ('false positives') and/or where negative outcomes occur despite the intervention ('false negatives').

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> *'[A]ny notion that better screening can enable policy makers to identify young children destined to join the 5 per cent of offenders responsible for 50-60 per cent of crime is fanciful. Even if there were no ethical objections to putting "potential delinquent" labels round the necks of young children, there would continue to be statistical barriers… [Research] shows substantial flows out of as well as in to the pool of children who develop chronic conduct problems. As such [there are] dangers of assuming that anti-social five-year olds are the criminals or drug abusers of tomorrow, as well as the undoubted opportunities that exist for prevention.'*
>
> Utting (2004: 99)

This is particularly salient with regard to preventing juvenile delinquency where Gatti noted some time ago that the right of children and young people not to be classified as future delinquents, whether they go on to become delinquents or not, is 'one of the greatest ethical problems raised by early prevention programmes' (1998: 120). Similar considerations and concerns apply to targeting entire communities or groups of people - such as 'Muslim youths' - as has been a widespread perception with regard to some anti-radicalisation programmes. This is especially evident when measures appear targeted at people based on religion or group membership, rather than because of an actual threat or distinct risk. Inadvertently, such generalisations can foster the very outcomes that they intend to prevent.

7.3 Key Lessons in Urban Security

Urban security interventions, generally, are poorly informed by the research evidence base, infrequently clarify the theories of change that are intended to inform their desired beneficial outcomes, inadequately or inappropriately implemented and seldom involve rigorous evaluation, such that wider lessons might be learned.

7.3.1 Problem-Solving: Problem-Based Approaches

In tailoring interventions to particular issues and contexts, problem-solving approaches - such as SARA (Scanning, Analysis, Response, Assessment) or the 5Is (Intelligence, Intervention, Implementation, Involvement, Impact) – provide a robust process-based framework through which to specify and better understand the nature of given security problem and guide practitioners towards better-quality interventions and their implementation.

Working outwards from defining the specific crime or security problem and engaging with the end-users and beneficiaries of an intervention is a more effective approach than existing solutions or bureaucracies/organisations available to respond to the problem. Given the siloed nature of service provision/responses and the segmented nature of knowledge and skills/resources, this demands harnessing multi-sectoral and diverse actors through pooled resources, skills, knowledge and capabilities in interdisciplinary and cross-professional partnerships.

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Figure 7.2: Riga Police Response to Domestic Violence
The Riga Municipal Police (RMP) implemented a pilot project from 2019-2020 (currently ongoing), which sought to provide improved responses to domestic violence incidents. The aim was both to provide better service to victims of domestic violence and to offer support to young people that may have been involved in or witnessed domestic violence incidents, in part to prevent those young people from getting involved in any subsequent juvenile delinquent behaviour as a result. This was achieved by ensuring that police officers received specialised training and qualifications to handle domestic violence incidents and any potential issues that might subsequently arise. Additionally, brochures and literature were provided to victims of domestic violence giving them further information about possible harms and access to resources. Interventions were also implemented in schools as a means of informing and seeking to prevent delinquent behaviours. This project demonstrated a scenario in which the RMP identified a deficiency in previously established processes and sought to provide their officers and the community with better resources to tackle not only domestic violence but also possible engagement with juvenile delinquency.

One of the limitations that constrained the implementation of problem-oriented policing is that it focused on the police organisation as the locus of the response to social problems when the levers to the problems often lay far from the reach of the police.

> *'The world is full of libraries full of good practices about crime prevention, urban safety and urban security but mostly nobody actually gets to test them properly because they require integrated solutions and they require collaboration.'*
>
> Barbara Holtmann, Fixed Africa, Interview

Nothing works everywhere and a lot of things work somewhere! Context matters – configured in time and space – in the causation of crime and insecurity. Crime prevention and urban security problems are complex and informed by a tangle of interacting causes and interdependencies, which differ across problems and contexts. There has been a tendency to search for universal solutions under the banner of 'what works' which has drawn attention away from the situated and contextualised features of local places. And simultaneously with little regard to which groups of people benefit from particular interventions or design features in a particular place/situation at a specific time.

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> *'Preventive interventions have to be intelligently customised to problem and context; success stories cannot simply be copied cookbook-fashion. Intelligent replication requires a process that customises action to problem and context. In this respect, replication will always involve some degree of innovation, trial, feedback and adjustment, whether minor or major. This in turn paces requirements on the kind and format of knowledge that security practitioners possess, and the institutional context of implementation.'*
>
> Paul Ekblom, University of the Arts London, Interview

7.3.2 Design and Innovation

Early intervention also demands considering the crime and security consequences of change and innovations - in technology, products and services - at the design stage, rather than retrofitting partial solutions after innovations have occurred.

Interventions at the design stage enable up-stream, early opportunities to effect security and harm reduction outcomes, rather than retro-fitting changes after the event. Secured by Design, Crime Prevention Through Environmental Design (CPTED) and 'defensible space' theories have all offered important insights that have informed practical and often successful measures. The design of motor vehicle security and the subsequent decrease in vehicle related crime is a notable example. Designs, however, must avoid being narrowly conceived around security at the cost of other social goods and security requirements need to be creatively balanced with a range of others including, aesthetics, convenience/accessibility, social inclusion and environmental sustainability.

Designing in crime and security features necessitates active engagement and responsibility on behalf of the producers of new technologies, services and products, as well as designers and architects. As the example of the Car Crime Index (in the 1980s) demonstrated, this can require significant political and organisational buy-in as designing in crime prevention and security features from the outset may be costly and disruptive to wider commercial imperatives.

Vulnerability-led design responses or too much emphasis on security can promote fear of crime and insecurity and foster social polarisation, with adverse implications for wellbeing. Human-centred design solutions afford sensitivity to local context, a focus on the nature of the problem(s) to be address, an understanding the causes of social problems, the nature of social interactions and the ways in which people use and adapt to solutions/interventions. Involving communities (or representatives) in the design of interventions creates a sense of (local) ownership and participation, as well as ensuring local context is accounted for and incorporated.

Cost-benefit analyses suggest that resources spent on security, policing and crime prevention might sometimes be better spent on other public services and essential infrastructure - i.e. health, education, transport and culture.

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7.3.4. Data, Methods and Measurement

Urban security demands different data than crime data alone and necessitates thinking differently about – and differently measuring – indicators of 'success' and outcomes in the evaluation of interventions. Factors such as levels of perceived unsafety, civic tolerance, social cohesion, trust in authority, community well-being and victim support are salient outcomes in urban security.

Figure 7.3: The Rotterdam Safety Index

The development of the Rotterdam Safety Index was a collaboration between the Municipality of Rotterdam and research bureau AEF (*Andersson Elffers Felix*). The process started in 2001 and the first Safety Index appeared in June 2002. It has been in use as a standalone tool for many years and in 2014, it became part of the newly developed integral tool: the Rotterdam neighbourhood profile ('*wijkprofiel Rotterdam'*). The Safety Index was designed to combine objective data with the subjective data, as well as data from different sources into a single figure per neighbourhood. Broadly, it combined two types of data: (1) **direct safety features**, such as police data on theft, violence, drug-related crime, burglary, vandalism, cleanness and wholeness and traffic incidents; and (2) **indirect safety features**, including the number of social security claimants, ethnic backgrounds, mobility, neighbourhood characteristics - economic value of properties and the number of people moving house - and satisfaction with neighbourhood. These data are used to compare neighbourhoods with each other and over time. In 2014, a new neighbourhood profile was developed that combined the Safety Index a Social and Physical Index to create a new Integral tool. Much like the Safety Index, it is a flagging tool that serves to highlight city areas in of focused attention. It draws on survey data conducted every 2 years with residents of the city (n=15,000) with includes questions on neighbourhood problems, victimisation and perceived safety. The neighbourhood profile comes equipped with a user tool, which helps citizens and users to explore the data (see: www.wijkprofiel.rotterdam.nl). The Index is a valuable resource for researchers, administrators and planners in developing strategies and policies as well as a transparent and useable tool for citizens.

The Rotterdam Safety Index (see Box 3) is a good example of this kind of valuable data-driven tool for managing public safety and informing problem-based design processes (see Hendriks and Tops 2003; Lub and de Leeuw 2017). It drew heavily in its design, development and subsequent modification on research evidence and academic expertise. It is also an illustration of how complex phenomena like safety and liveability can be categorised, classified, measured and graded in meaningful ways that are actionable (Noordegraaf 2008). Moreover, the Safety Index's dynamic evolution over two decades is testimony to the ways in which it has been adapted to accommodate its application in designs, municipal policies, how it has been invoked by key players - such as politicians and officials - and in respond to identified counter-productive effects arising from such measurement and use. For instance, one of the early lessons was to avoid the stigmatising potential of associating certain neighbourhoods with high levels of crime and insecurity even if this was accompanied by higher levels of financial resources. To this end, the initial traffic light system - ranging from green, through amber, to red - was replaced with colours from dark yellow to dark green to maintain the flagging effect but reduce its stigmatizing potential. Furthermore, it was

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decided that the neighbourhood profile would not use scores between 1 and 10, but rather a score below or above the average across the city of Rotterdam. As a dynamic, reflective resource and tool, the index has also served to foster coordinated action given the engagement of and use by multiple municipal actors.

Understanding the impacts of urban security requires that attention be accorded to the inter-subjective dimensions of lived experiences, as well as the quantifiable and measurable features that survey data reveal.

> *'Lived experience is very often ignored. When it comes to crime statistics, the reality in most communities is that you can tell people they are safe until you are blue in the face, but if they don't experience it or perceive it to be true, it doesn't matter. So, there needs to be a much bigger conversation about how we value different kinds of data, because that will influence the way we capture data and what we do with the data.'*
>
> Barbara Holtmann, Fixed Africa, Interview

Good quality data collection and sharing across relevant organisations, as well as ethically sensitive data management and use: allow for joined-up provision; afford opportunities for joint analysis and coordinated working between relevant agencies; provide the capacity to track and support individuals and families through service provision/diverse interventions, and assess their trajectories; provide an evidence-base from which to assess effectiveness; ensure the best use of resources and facilitate best practice; and afford opportunities to monitor performance and render services accountable and reviewable. Good quality, shared data are vital in clarifying and defining the nature and extent of the problem(s) being tackled through focused analysis to ensure a properly problem-based intervention.

> *"If you take the view that you're trying to prevent crime on a problem-solving basis, then you need to be very clear on what the problem is, and that means you need data."*
>
> Gloria Laycock, University College London, Interview

There is often a confusion between risk factors as 'flags' for (or indicators of) causes and casual mechanisms themselves, particularly evident in preventing juvenile delinquency. To distinguish between 'causes' and 'flags', we need to identify a plausible explanatory process (theory of change) that connects the supposed cause and effect and that actually produces the effect.

Interventions and their evaluation need to be clearer about the causal factors (and the theories of change) that it is assumed will cause a mechanism to produce certain desired outcomes. Hence, we

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need strong and credible reasons for how and why the assumed cause will produce the effect in question. Evaluation is important for ***development*** (to help strengthen institutions), for ***knowledge*** (to provide a deeper understanding of specific questions or fields) and for ***accountability*** (to measure the outcomes and their effectiveness/efficiency).

Methodologically, the 'what works' movement - through its emphasis on quasi-experimental methods and random control trials - has (deliberately) focused attention on single interventions and sought to remove contextual factors and the analysis of the implementation processes, in order to highlight constant conjunctions. Programme evaluations need to play greater attention to both the context and the processes of implementation in informing ***what works, where and for whom***.

For evaluations to be meaningful, the aim of the intervention needs to be clearly defined, as do subsequent outcome measures by which the success of the intervention can be assessed. Rather than seek to evaluate the presence or absence of a successful crime preventive effect, there is a need to explore the causal mechanisms (or 'theories of change') that are believed to underlie and produce those effects/outcomes (or their absence). Understanding how something works or is intended to work, enables more focused design of interventions that also take account of contextual factors. Knowledge about failure and of undesired side effects is as important as learning about success. Urban security evaluations tend to focus on success stories and in policing interventions too often appear 'doomed to succeed' (Crawford 2017: 204).

> *'The evidence base is incredibly immature, if you're looking for specific initiatives. But I think we've got a huge amount of knowledge about how to solve problems… And I think the police need to behave like engineers. They need to experiment. They need to try things. They need to see if they work or not. The trouble with police culture is they're not allowed to fail. And if you're experimenting, you are taking risks and you're risking failure. And there's a huge cultural reluctance to take risks for all sorts of understandable reasons.'*
>
> Gloria Laycock, University College London, Interview

7.3.5 Implementation Matters

The overwhelming lesson from the last 30 is that the institutional context and resistant organisational cultures have often undermined the implementation of research-informed urban security and crime prevention. It is not that the science is poor with regard to crime prevention and urban security – although it is inevitably incomplete, in some places inadequate and shifting in the light of technological and social change - but rather that it is not being implemented or implemented in inappropriate ways, circumstances and situations that constitute the most basic contemporary challenge.

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> *'We are left wondering why we cannot implement measures that we know will work, reduce crime, and cost less for law and order… The most important conceptual insight is that politicians talk about prevention but do not do it, in part because they are not familiar with the evidence and in part because they are brain washed by the special interests of police, lawyers and prisons.'*
>
> Irvin Waller, University of Ottawa, Interview

The importance of political leadership, public trust and institutional commitment, support, appropriate levels of resources and buy in from relevant stakeholders are all pivotal to the success of interventions. Communicating the successes of crime prevention and the effectiveness of up-stream early interventions in ways that elicit long-term political commitment and organisational change remain a considerable challenge.

> *'I hear researchers continually say we need more research. I am not against more research but we need to focus way more than we do on getting current research used. Medical folk talk about "doing no harm". The status quo is doing a lot of harm to both offenders and victims, as well as potential offenders and victims. Most of the actions that are logical and/or proven to prevent crime invest in improving lives and life chances. In sum, even if logical action and prevention did not stop crime better than the status quo, they do no harm and do good.'*
>
> Irvin Waller, University of Ottawa, Interview

There is a long history of successful experimentation in urban security with robust evaluation to support their effectiveness and impact, but the lessons from which are not mainstreamed and realised in routine organisational practices or not appropriately transferred to other places and populations. Demonstration projects may providing interesting insights and learning but will result in little change if they are not embedded within infrastructures that align with cultural values, underpinned by sustainable funding and supported by long-term organisational commitments.

7.4 IcARUS Cross-Cutting Themes

The IcARUS project has identified four cross-cutting themes as the focus of particular consideration. We consider each of these in turn.

7.4.1 Governance and Diversification of Actors

Today, the mantra that '*crime prevention is not solely a responsibility of the police but a task for everyone working together'* is often articulated but too rarely interrogated for the complexities that accompany realising such an ambition. It is rightly acknowledged that the levers of crime prevention

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and public safety lie far from the reach of the police and criminal justice system and that harnessing the contribution of diverse actors and organisations is vital in delivering effective urban security. However, achieving a genuine partnership approach has proved stubbornly difficult across European cities. Undoubtedly, much has changed over 30 years, as the discourse of partnerships is now accepted wisdom and institutional frameworks exist to coordinate collaborative responses and deliver services. Much progress has been made on the road from fragmentation through cooperation to a more recent emphasis on co-production and co-design of services. Nevertheless, the Review suggests that progress has been hesitant and uneven.

The talk of 'partnerships' and 'co-production' still belies the reality of single agency 'siloed' responses, whereby state organisations preserve their control over segments of the crime control 'turf' like fiefdoms. Delivering a 'joined-up', approach has proved more complex and the obstacles much more stubborn than were often assumed in the early honeymoon years. Some of the main barriers to successful partnership include:

- a reluctance of some agencies to participate fully;
- the frequent dominance of a policing agenda;
- unwillingness to share information; conflicting interests, priorities and cultural assumptions on the part of different agencies;
- local political differences;
- lack of inter-organisational trust;
- a desire to protect organisational budgets;
- a lack of capacity and expertise; and
- over-reliance on informal contacts and networks which lapsed if key individuals moved on. These all remain obstacles today.

A number of key challenges remain in seeking to realise the genuine co-production of security in which citizens and civil society groups are actively engaged:

- It necessitates breaking free of the state-centred thinking that remains the frame for much urban security and community safety across Europe which remains largely dominated by public sector agencies and accords less engagement with the private and voluntary sector organisations.
- In reality, it necessitates relinquishing a certain degree of control by state agencies over the direction and priorities of safety networks, which many are reluctant to do.
- It requires that community engagement reaches out to marginalised disadvantaged populations particularly those most vulnerable to victimisation and offending; and
- It demands acknowledgement of the more complex responsibilities, accountabilities and governance structures that co-produced safety entails.

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Figure 7.4: Community Policing in the City of Lisbon
Lisbon Municipal Police (LMP) have implemented a dedicated model of community policing in certain neighbourhoods, offering a highly context-specific and targeted approach. This provides a positive example of an intervention that seeks to include community feedback and context into consideration and help to foster trust within the community. The process involves, first, a detailed needs analysis of the community. Subsequently, police officers seek to respond to selected needs and problems identified. For example, in some neighbourhoods with higher migrant populations, a female officer has been tasked with working with local community members to encourage greater trust and engagement with police. These officers are assigned to particular neighbourhoods and build strong relationships with local stakeholders and the wider community. In many cases, these officers are not in uniform, but are dressed casually and seek to provide a point of contact for many in the community. Officers are often a familiar member in the community and can help to address issues that may arise in the neighbourhoods. This helps to establish trust within the community and the police. This approach also requires the community to come together and is usually only implemented in neighbourhoods that actively welcome the approach adopted. So far, there have been positive community well-being effects and safety benefits recognised in those neighbourhoods where implementation has been embraced. There is currently a waiting list for implementation in additional neighbourhoods.

Insights from research highlight how the motivation of local communities to collaborate with the police in providing neighbourhood policing depends on levels of trust and perceptions of procedural justice, prior community experiences with the police/authorities as well as perceptions of the severity of the risk and proximity of given risks.

Effective multi-stakeholder partnerships require:

- shared ownership;
- clearly defined outcomes and expectations of each contributing partner;
- acknowledgement of asymmetries of power differentials;
- constructive negotiation of conflict;
- mutual understanding and regard for difference;
- trust and information-sharing; and
- meaningful engagement with end-users and beneficiaries.

Developing shared values in collaboration demands that partners understand each other's priorities, values, positions and limitations well enough to have meaningful dialogue about the different interpretations of the problem, and to exercise collective intelligence about how best to seek to resolve it.

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Figure 7.5: Turin City - ToNite Project
The city of Turin has developed the ToNite project as a multidisciplinary approach that incorporates environmental design elements alongside increased partnerships with local stakeholders and the community to help develop a safe and engaging atmosphere for residents during the evening hours. This project was designed using a bottom-up approach and breaks from traditional forms of place-based management, which may have offered solutions such as increased police presence, CCTV, and access control for public spaces, instead of a specific urban strategy. It relies heavily on community engagement, participation and feedback on how the space can be better used, as well as how to increase perceptions of safety. This project also seeks to regenerate urban settings that are perceived as unsafe or undesirable and to create a welcoming atmosphere that could be used by diverse populations and age groups in the community. It remains in its trial phase, but has promising output measures and impact assessments incorporated into the design for any potential future research, and has already developed new tools, such as the Urban Data Platform (UDP) which provides public administrators with a central platform that brings together data, assessments, and input from communities.

Insufficient regard has been accorded to understand the diffusion of innovations and the structural features of organisations, including their propensity to take up new knowledge (***absorptive capacity***) and the presence or not of ***a receptive context for change***, including things like organisational culture and environment (Greenhalgh *et al*. 2004).

For multi-stakeholder partnerships in urban security to play an evident role in transforming organisational cultures, they also need to be embedded and sustained in frontline practices. The reality is that successful inter-organisational partnerships need to be forged, nurtured and supported at all levels by people committed to realising the benefits of collaborative working and exploiting the opportunities for innovation and cross-cultural learning across organisational boundaries.

7.4.2 Technology

Across the development of urban security, there has been a tendency to prefer technological solutions – i.e. hardware – to human solutions in regard to addressing security concerns, with less regard for the intersection and interaction between social and technological processes; between technology (as hardware) and people. Social media and the online space is often portrayed as the cause of problems and harms, but its potential as a platform for positive intervention, learning and change should not be overlooked or underestimated.

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> *'Technology is a tool for enabling human-centred solutions to be realised — it's not an end in itself. And, actually, there are lots of examples of where technology is just implemented and badly specified and doesn't fit with human users very well. And it all breaks down... The application of technology needs to be very much subservient to human agency and responsibility. I think that the important thing to consider is that there are people who are responsible for policing an area — for dealing with certain groups or problems — and technology needs to support that sense of human responsibility and human agency.'*
>
> Andrew Wootton, University of Salford, Interview

The history of crime prevention reminds us that much prevention serves as an attempt to 'retrofit' solutions to novel criminal opportunities that are created by new technologies. Undoubtedly, future directions in crime prevention will be shaped by technological advances and innovations, some as yet unknown. Many cities, including some of the IcARUS partner cities, are investing in technology to help support their urban security efforts. It is acknowledged that technological advances bring with them not only opportunities for prevention, but also increased risks. Drones, for example, are increasingly deployed to monitor larger crowds during demonstrations, helping law enforcement perform their tasks and keeping people safe. However, there are also significant concerns for law enforcement due to the potential criminal uses of drones to evade traditional prevention efforts, as well as for privacy and surveillance. There is a need to better understand the extent to which crime prevention lessons from the physical world translate into cyberspace and their possible application (or not) to online environments. Our knowledge and practices remain decidedly territorially rooted.

> *'It is said that generals always fight the next war with the weapons of the last. Similarly new technology is looked at through the eyes of the users of the old. Look at early motor cars. They looked like carriages with the horse missing. Indeed, they were referred to as horseless carriages. The Internet of Things requires a new mind-set. The Internet of Things and mobile telephony should evoke fundamental questions of the kind that: "If X happens, who should know, what should happen and when?"'*
>
> Ken Pease, University of Huddersfield, Interview

In an age of digitisation, big data and digital culture, how we adapt to emerging technologies will be important. The *volume*, *variety* and *velocity* of new forms of data enable possible interventions in the present that shape the future in diverse (and, as yet, unimaginable) ways. Not only does this 'revolution in data' provide new sources of knowledge, stimulate new approaches to its generation, analysis and visualisation, and prompt new opportunities and questions for research, but it also presents novel challenges. These are particularly evident with regard to *velocity* - the speed at which data are added or processed through computational algorithms. Such big data provide possible

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insights into shifting patterns and changing contexts, potentially enabling real-time awareness and management of risks and problems as they arise. Real-time data enable the generation of knowledge and its application in compressed time horizons and prompts a perspective of **emergent causality**. It elicits a reflexive approach to knowledge creation and application as relational, with feedback loops and changes through iterative processes. These challenge traditional scientific conceptions of *cause-and-effect* relationships whereby causal lines of prediction and implementation become less relevant (Mayer-Schönberger and Cukier 2013).

> *'A development which has massive potential is machine learning. This permits the identification of criminogenic features of individual locations and small places. It allows anticipation of crime much more precisely than human "expertise".'*
>
> Ken Pease, University of Huddersfield, Interview

Most particularly, algorithms built into sociotechnical assemblages appear to afford far-reaching potential for security (Staniforth and Akhgar 2015). Algorithms imply novel ways of knowing, even though their actual operations and software content are all too frequently inaccessible and invisible. They exemplify the complex interplay and co-constitution of human machine-based elements of technology. As such, the data revolution also presages forms of 'algorithmic justice' where preventive designs are built into the algorithms that determine how information is used. Just as Amazon and Google seek to predict our tastes, so, too, the algorithms of future services and utilities seek to prevent or design out 'bad risks' (Harcourt 2015).

Figure 7.6: The Use of Technologies in the Service of Security in Nice
Since 2008 and the election of the current Mayor, the city of Nice has combined operational deployment of existing technologies, such as the latest generation video protection cameras, with a reinforced partnership between the municipal police, city engineers, researchers and students from the university sector, as well as so-called 'start-up' companies. This partnership has enabled the city to innovate, particularly in the design and deployment of equipment aimed at securing public places, such as the Promenade des Anglais, while preserving the aesthetics of a recognised heritage site. Various experiments have made it possible to develop and extend new technological innovations linked to the city's urban supervision centre, including alert buttons and emergency call terminals. Other trials include the use of facial recognition or the use of drones, but they are currently not operational due to the legal provisions in France which prohibit their use.

Artificial intelligence (AI), machine learning and algorithms may come to replace expert knowledge and processes of interpretation. In so doing, they push the boundaries of cognition decision-making, agency and responsibility beyond individuals, polities and the nation-state. The implications for urban security of AI, machine learning and algorithms build into products, services and utilities are largely uncharted, as expert knowledge and processes of interpretation are replaced by machine

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learning and automated decision-making. What we do know is that these algorithms are not impartial but embed with different assumptions about behaviour and risk that are opaque and obscure. As such, the deployment of AI, algorithmic techniques and technologies for security has profound political implications and raise fundamental ethical and normative questions about the values that inform the future of urban security.

> *'Amid the apparent proliferation of algorithmic techniques in the gathering of intelligence data from battlefield, border and city streets, what are the political and ethical stakes involved in securing with, through and via algorithms in the 21st century?'*
>
> Amoore and Raley (2017: 4)

7.4.3 Gender Issues

In many ways, much of the knowledge base concerning the prevention of crime and insecurity was and has continued to be constructed in relation to male offending and risks presented largely by male activities. Juvenile delinquency research, for example, has been dominated by the treatment and study of masculine behaviours. So too, the study of radicalisation leading to violent extremism has often focused on male pathways and activities. In more subtle ways, some of the presumptions that have informed broad theories - such as rational choice theory - have frequently posited an implicit male autonomous individual as its assumed foundation. The growing focus on victims of crime, fear of crime and the adverse impact of perceptions of insecurity introduced a decidedly gendered understanding of urban security in ways that challenged the dominant male focus and related gendered assumptions.

> *'Gender has a key role when it comes to the design of public spaces… Obviously, gender is a big factor in terms of offending behaviour. It's also a factor in terms of the victims of offences. And there are gender differences related to feelings of insecurity. But there's also a gender dimension in terms of the types of solutions that are preferred. There is research highlighting the fact that the focus on technology solutions — or on more aggressive interventions — is something that's coming from a more masculine perspective. There's a need for a different approach to security that is more understanding of human beings — more connected to their experiences, to their feelings. So, gender is really something that runs through the security domain — from the design of public space, through the use of urban environments to offending behaviour.'*
>
> Caroline Davey, University of Salford, Interview

Hence, gender has become increasingly important in framing urban security in terms of both the lived experiences of security and the production of safety. Violence against women and girls is by

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no means a new social problem but has become the focus of greater attention within urban security policies and research. It is one field in which urban security is framed not only by behaviours in public spaces but also how these play out in and informed by behaviours and actions that occur in 'private' and domestic spheres.

Consequently, more recently, gender has come to play a major feature in debates about the use and quality of public spaces, how everyday safety is experiences and how public spaces are designed, managed and regulated. In a different vein but relatedly, domestic abuse, child abuse and online child sexual exploitation have all become community or neighbourhood issues with significant implications for urban security. They are no longer caste as 'private' matters.

7.4.4. Transnational and Cross-Border Dimensions

Global flows of capital, goods, people and risks increasingly mean that crimes and harms to public safety are interconnected with and interdependent upon developments that have their origins or expressions far beyond national borders. While crime control and responsibility for public security have been deeply inscribed within the formation, development and fortunes of the modern nation-state with its fixed territorial borders, modern crimes and insecurities cut across such territorial boundaries. Technological innovations – like the internet - have further broken the ties of security risks from their erstwhile territorial foundations. The interconnected nature of contemporary security risk and threats, which extend beyond national territories, has both reinforced the limited competency of the nation-state acting alone to control the flows of crime and blurred the distinctions between external and internal security. Borders and boundaries have become increasingly impermeable.

There appears to be an increasingly profound relationship between globalised conditions and local circumstances. This constitutes a fundamental challenge of contemporary societies as these tendencies are uneven: whilst capital, good and information flow across borders, politics, people and institutions designed to preserve peace and order remain decidedly local. Global and local insecurities routinely inform and interact with each other. On the one hand, policing and security measures designed to prevent and manage international threats demand local intelligence and responses, and on the other hand, the experience and salience of neighbourhood safety is informed and influenced by international trends, conflicts and developments. Urban insecurities may have their origins in injustices and conflicts experienced both locally and/or in other parts of the world. As a result, both the production and mitigation of new risks lie beyond the control of the traditional authorities, such that national and municipal institutions on their own are not capable of managing security without substantial international co-operation and the involvement of private, voluntary and community level organisations.

This is particularly evident from the review of organised crime and trafficking where the illicit movement of people, goods and capital is itself the problem. It is also eminently true of radicalisation where the triggers and facilitators of violent extremism may lie beyond national

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borders. But also, in different ways, the contemporary insecurities that permeate public spaces may have international and transnational connections.

7.5 Knowledge Gaps and Future Challenges

Compared to the field of healthcare and medicine, the urban security evidence base remains embryonic. While much has been learnt about the effectiveness and efficacy of urban security interventions over the past 30 years, there remain persistent knowledge gaps and uncertainties in the face of technological and social change. In the field of urban security where risks and harms are continuously changing, moving and evolving in dynamic fashion, there are both 'known unknowns' and 'unknown unknowns'. Here, we focus on the former.

Some key knowledge gaps identified include the following:

- Predicting future crime and security trends and developments, given their dynamic nature is intrinsically difficult.
- All evaluations produce knowledge of what worked (in the past) for a particular population, under specific circumstances, at a particular time and may not hold for a future population at a different place or time. The inferences that can be drawn are contingent.
- The knowledge base with regard causation and the causal interactions between multiple factors remains limited.
- The role that social, educational and welfare provisions play in shaping the propensity for crime and criminal behaviours remains poorly understood.
- Too little is known and infrequently robust data are collected about the processes of implementation that influence the effectiveness of urban security interventions.
- There is insufficient understanding of the ways in which context shapes successful outcomes and the nature and extent to which particular preventive mechanisms are context-determined or context-dependent.
- More can be learnt comparatively about the ways in which urban security interventions and their effectiveness are shaped by differing culture, social practices and legal, political and administrative frameworks.

Looking both to the present and the future, climate change is likely to present an increasing array of security challenges. Environmental change has already become a major force propelling migration and displacement across the world. It will continue to have significant implications on movements of population and scarcity of resources, which will express itself on European streets in different forms. How this plays out in terms of the urban security challenges of particularly cities at given times will undoubtedly be uneven and differ across Europe.

An ageing population in our cities presents different needs and demands in terms of security, hastening possible inter-generational tensions and challenges for inter-generational security. With the likely implications of global warming precipitating new transnational security threats, how people interact with nature and emerging technologies will become evidently more important.

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Likewise the growing inequality and social polarisation combined with greater population mobility will serve to underscore the importance of living confidently with increased diversity within cities and how best to foster tolerance, respect for difference and social inclusiveness. Given the capacity of crime and insecurity to bifurcate the 'offender' from 'victim', the 'enemy' from 'friend', the 'acceptable' from the 'antisocial' and to solidify lines of difference between groups of people. In this and other contexts, the relationship between security as a public good and other social values will continue to be crucial.

Hence, climate change, an ageing population and growing social polarisation, diversity and inequality are all likely to interact with wider social and technological change in ways that are more complex, interconnected and interdependent, raising new challenges for the tense relationship between liberty, security and other social values.

In this light, responding to public perceptions of insecurity by providing additional security interventions, technologies or hardware may fail to engage with the issues underlying these demands. It may also miss the opportunity to subject these demands to rational debate and local dialogue. Hence, the need to engage local publics, stakeholders and user communities in genuine problem-solving processes that investigate beyond the immediate appearance or superficial expression of security problems. Seeking solutions to problems of local order through security alone may serve to exacerbate population's fears and entrench perceived lines of difference within and among local communities.

> *'I think there is a stronger and stronger connection in terms of terminology, definitions, priorities, policies, etc., between urban security and the control of political dissent. It is as if the control of public spaces is now merging… At the same time, you are using the same type of tools and rules to control protests in public space as with controlling the poor immigrants from begging on the corner. The "old" matter of poverty marginality has shifted toward control of political dissent, and the connection is public space. So in the future, I think this is the thing that we will have to pay a lot of attention to.'*
>
> Rossella Selmini, University of Bologna, Interview

Ultimately, research evidence is only one element in the development and design of contextually appropriate and legitimate urban security intervention that address particular problems, in given situations, at a specific time. Given the breadth of their competencies and role as local anchor institutions, city/municipal authorities – working in partnerships with various public, private and third sectors service providers – have a vital role to play in ensuring inclusive urban security policies that serve the needs of diverse communities and that harness expertise, resources, data and commitment of multiple actors in the interests of public safety, while simultaneously balancing

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these with wider social value judgements that inform the ethical principles, preferences, culture and aspirations of a society.

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8 Conclusions

This *Review* of the accumulated knowledge base concerning the development of urban security has sought to synthesise and draw attention to knowledge that is actionable, with particular reference to the four focus areas considered. In other words, it has sought to highlight evidence from past experimentation, learning and research that might usefully frame and inform future innovations in urban security. Much has been learned over the last 30 years and much has changed in terms of the societal contexts in which security and safety operate as public goods. As we have sought to emphasise, one of the central challenges in synthesising the knowledge base is that most of the research is written by and for researchers and tends to focus on exploring narrow questions of internal validity and methodological robustness. Much of the research literature has over-estimated the value of methodological rigour and a rigid hierarchy of evidence in its quest to understand 'what works', paying insufficient regard to the relational and process-based mechanisms that foster change. These have often come at the expense of our understanding of wider contextual factors and processes of human action in implementation, precisely those issues that are of great interest and value to policy-makers, practitioners and citizens.

In the face of contemporary security challenges, increasingly diverse urban populations and growing social polarisation, there is now as great a need as ever for urban security policy-makers, practitioners and researchers to combine their knowledge, expertise and insights in ways that engage directly with those people on the receiving end and affected by urban security programmes and interventions. To do so, we will need to understand better the limitations and constraints of each other's motivations, values and priorities in co-designing effective interventions. This will necessitate bringing together parties that frequently have markedly different priorities and interests, with the aim of working together towards mutually agreed shared goals. At its core lies the goal of collaborative advantage that derives not simply from the combination of differing perspectives but also in framing and shaping questions, methodologies and outcomes differently. Hence, negotiating common purpose, forging shared priorities and ensuring appreciation of the divergent contributions of differing partners are all cornerstones for mature partnerships in the co-production of urban security (Crawford 2020). Certainly, the last 30 years have witnessed a greater mutual recognition across these different professional groups often forged through greater partnership working. There remains, however, considerable scope for further collaborations that engage researchers, practitioners, policy-makers and administrators in the process of mutual learning, knowledge generation, programme co-design and implementation of the kind that the IcARUS project is advancing.

Given the breadth of their competencies and their role as local anchor institutions, city and municipal authorities have a vital role to play in harnessing these coalitions for change in ways that break free from the straight-jacket of siloed governmental thinking and inter-professional rivalries. They are well placed also to ensure inclusive urban security policies that serve the needs of diverse communities and that bring together expertise, resources and data, as well as the commitment of multiple actors in the interests of public safety, while simultaneously balancing these with wider

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social value judgements that inform the ethical principles, preferences, culture and aspirations of urban societies.

> *'We need to show our community that we are able to unite, not between governments, but city to city to find an answer that has never been proposed by our respective governments. I believe we have the means to succeed together.'*
>
> Jean-François Ona, City of Nice, Interview

However, if the genuine co-production of security is to be more than a distant ideal or hollow refrain, this will require a reformed conception of what constitutes knowledge and how it is best mobilised and deployed. Research evidence can help reshape the social world it seeks to describe. To do so, it needs first to be appropriately translated, communicated and applied to inform action and change. As decades of criminological research testify, however, the effects of research on policy are not always benign. Knowledge does not simply solve governance problems but also creates new ones. Knowledge and governance are mutually interdependent. Knowledge is enacted in and through governance and the allied processes of implementation. Hence, knowledge needs to be coupled with practical action. Genuine co-production is 'not about ideas alone' nor is it 'only about how people organise and express themselves, but also about what they value and how they assume responsibility for their interventions' (Jasanoff 2004: 6). This demands not merely a methodology or abstract evidence base but also a practice that combines problem-raising and problem-solving.

It is precisely in this challenging domain that the IcARUS project is seeking to work to forge innovative approaches to urban security; ones that build firmly upon the solid foundations afforded by the knowledge base and seek to combine this with a human-centred design methodology and collaborative implementation within the partner cities. The commitment and engagement of the city authorities of Lisbon, Nice, Riga, Rotterdam, Stuttgart and Turin afford a unique opportunity to progress this vision. Realising the blend of past learning with future provision, the combination of social and technological innovation and the means through which these can support societal values of tolerance, trust, social inclusion and harm minimisation in ways that address the safety needs of diverse communities in our European cities, presents the next step in this journey.

Integrating insights from the research evidence base - set out in this *Review* (Task 2.1) – supplemented by learning from the inventory of tools and practices (Task 2.2) and feedback from across the IcARUS Consortium, International Expert Advisory Board and Consultative Committee of Cities (Task 2.3), the 'roadmap' (Task 2.4) will provide the framework, principles and requirements to inform the subsequent direction of travel.

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9 Methodology and Data Collection

Here, we set out in detail the research design, methodology and data collection processes that inform this *Review* and its findings.

9.1 Ethics Approval

Ethical approval was gained through the University of Leeds Ethic Committee for Task 2.1 (State of the Art Review). We abided by the ethical guideline and requirements as stipulated by the University of Leeds Ethics Committee and successfully gain approval in April 2021 (ethics application reference: AREA 20-134). All relevant ethical documents (including participation information sheets and consent forms) can be requested if necessary.

9.2 Review Parameters and Search Strategies

To ensure a consistent approach across the *Review*, the following strategy was applied to identify the relevant literature for each focus area to address the research questions, outlined at the beginning of each focus area *Review* section.

9.2.1 Reviewing the current state of knowledge

We conducted a review of the scholarly evidence base for each of the four focus areas. Due to the broad endeavour of conducting 30-year reviews in four rather large focus areas, we decided to limit our search to different types of reviews, i.e., scoping, systematic or literature reviews by way of search term or selection of publication type. This would ensure that the interventions included have already been assessed as being of a higher degree of quality and rigour.

Given the project's overarching focus on prevention, we limited our focus to primary and secondary prevention efforts, rather than tertiary work with offenders. If the review did not include any preventive interventions, the paper needed to contribute to the knowledge base in a way that informed the research questions outlined above.

9.2.2 Inclusion Criteria

Databases

We conducted keyword searches in the following databases: Scopus, Science Direct, Web of Science, ProQuest, Campbell Collaboration. Abstract, keyword and title fields were searched using focus-area-specific search strings (outlined below).

Publication date

In line with IcARUS project parameters of reviewing the developments over the past 30 years, we set the start date as January 1990, 30 years prior to the project's commencement, and the end date as June 2021, when we conducted our searches.

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Geography

Research originating in or relevant to the European context were prioritised. We also focus on city level (and sub-city, i.e. neighbourhood) interventions by municipal authorities and law enforcement agencies (LEAs) - rather than national security strategies promulgated by national governments and organisations.

Language

The search was limited to English language publications, as agreed, which introduces obvious, but necessary, biases and limitations of which the authors are aware.

9.2.3 Process

The findings from each database were exported into Rayyan, a web-based tool designed to expedite the screening process (Ouzzani et al. 2016). After removal of duplicates, screening of title and abstract further eliminated irrelevant records. We made the decision not to include theses. A small number of studies identified in our searches had to be excluded as we were unable to access a full text copy of the manuscript. Due to the complex nature of this research more specific inclusion and exclusion criteria can be found in the focus area-specific section below.

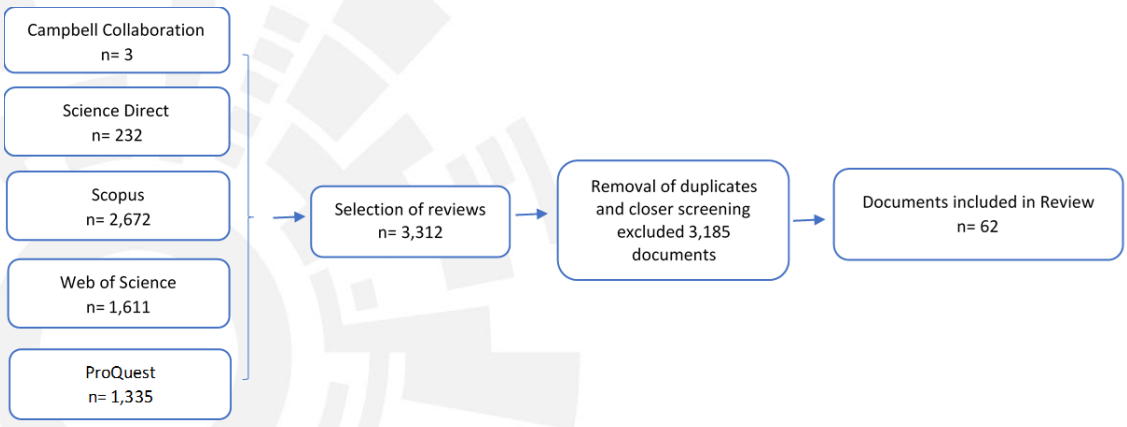
9.2.4 Preventing Juvenile Delinquency

Search Strings

(juvenile OR youth OR adolescent OR minor OR underage OR child* OR teen*) AND (crime OR delinque* OR "anti-social" OR antisocial OR at-risk) AND (prevent* OR reduction OR implement* OR program OR intervention) AND review AND (literature OR umbrella OR scoping OR meta-analysis OR mapping OR "state of the art" OR state-of-the-art OR rapid)

AND ("juvenile" OR "youth" OR "adolescent" OR "minor" OR "teen") AND (delinquency OR “anti-social”) AND prevention

Figure 9.1: Search Results for Juvenile Deliquency



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Focus Area-Specific Notes

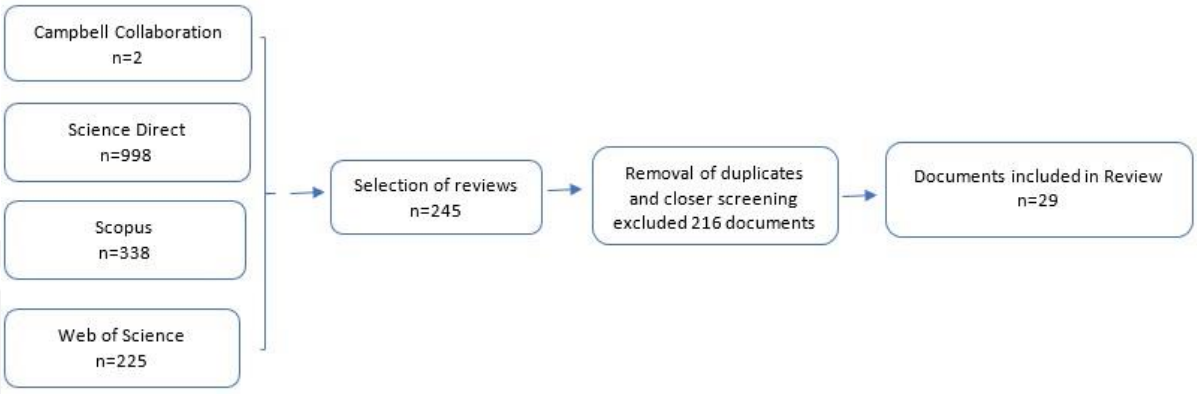
We did not set an age limit in regard to inclusion or exclusion of studies or reviews, as our primary focus within this activity is to consider primary and secondary forms of prevention. By not implementing an age range, we hope to include a variety of types of prevention reviews or studies, which consider early childhood programmes, as well as pre-teen and teenage age focused programmes. All programmes were delinquent or crime specific type programmes, which seek to address behaviours or actions which will likely result in criminal activity or participation. Programmes which consider delinquency or criminal behaviours to be an additional or non-primary outcomes were not included – these include educational disability focused (ADHA, dyslexia, etc). Further exclusion criteria includes health/welfare related issues, sex trafficking, or child abuse, risk assessments/predictors and victim focused measures.

9.2.5 Preventing Radicalisation Leading to Violent Extremism

Search Strings

(terroris* OR radicali* OR extremis* OR CVE) AND (prevent* OR intervent*) AND (review) AND (systematic OR scoping OR literature)

Figure 9.2: Search Results for Radicalisation



Focus Area-Specific Note

The most prominent reason for exclusion of results was that the study was not about radicalisation or centred on de-radicalisation strategies. It is important to reiterate that for the purposes of this Review, any tertiary interventions, such as de-radicalisation programmes, were not included as they fell outside of the scope of the Review. Other exclusion criteria were that there was neither an intervention, nor any other insight into the prevention of radicalisation pertinent to the research questions. Closer inspection of studies highlighted research not picked up by our initial search – such papers were subsequently included.

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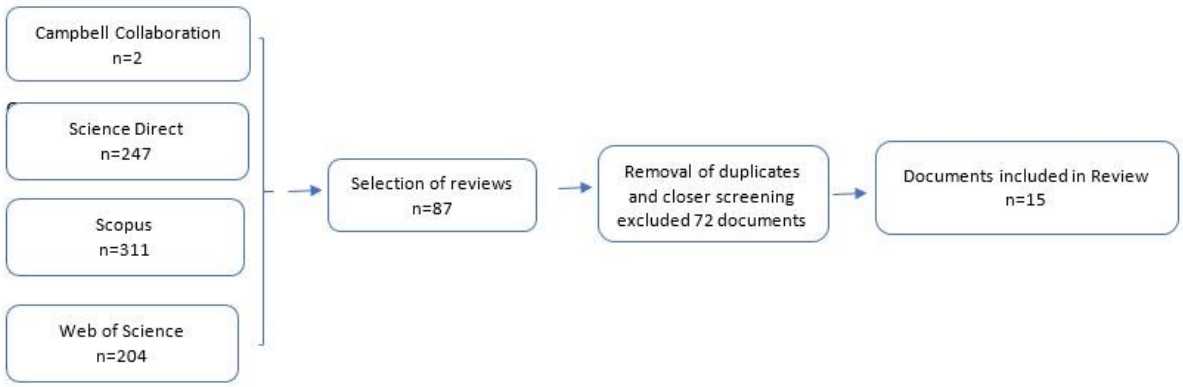
9.2.6 Preventing and Reducing Trafficking and Organised Crime

Search Strings

("Organi* crim*" OR traffick* OR "human traffick*" OR "criminal exploitation" OR "drug markets" OR "drug trade" OR gang OR "illegal goods" OR "illegal services" OR "illicit trade" OR "modern slavery" OR "forced labo*" OR "Palermo agreement") AND Prevent* AND evaluation

Science Direct's limited search capacity necessitated two separate searches: 1. ("organised crime" OR "organized crime"OR trafficking OR "criminal exploitation" OR illicit OR slavery) and (prevention) and (intervention); and 2. ("drug market" OR gang OR "forced labor" OR "forced labour") AND (prevention) and (evaluation)

Figure 9.3: Search Results for Reducing Trafficking and Organised Crime



Focus Area-Specific Note

Prior to applying the Review filter, all initial results returned from searching the keyword and abstract fields were scanned to ensure relevant studies were not overlooked. Upon closer examination of the results, multiple papers relating to a US-focus on gang culture were excluded as they are not relevant to this *Review*. Papers emphasising health-related outcomes of victims, or focusing on aspects only tangentially related to the subject area were also excluded. In cases where the same study returned multiple different entries, the most recent or appropriate was selected for inclusion.

9.2.7 Design and Managing Safe Public Spaces

Search Strings

(crim* OR fear OR attack OR violence OR disrupt* OR security OR terror*) AND ("public spaces" OR "community space" OR "shared space" OR "public places" OR "defensible space" OR urban) AND (intervention OR program OR measure OR initiative OR prevention OR protection OR safety OR

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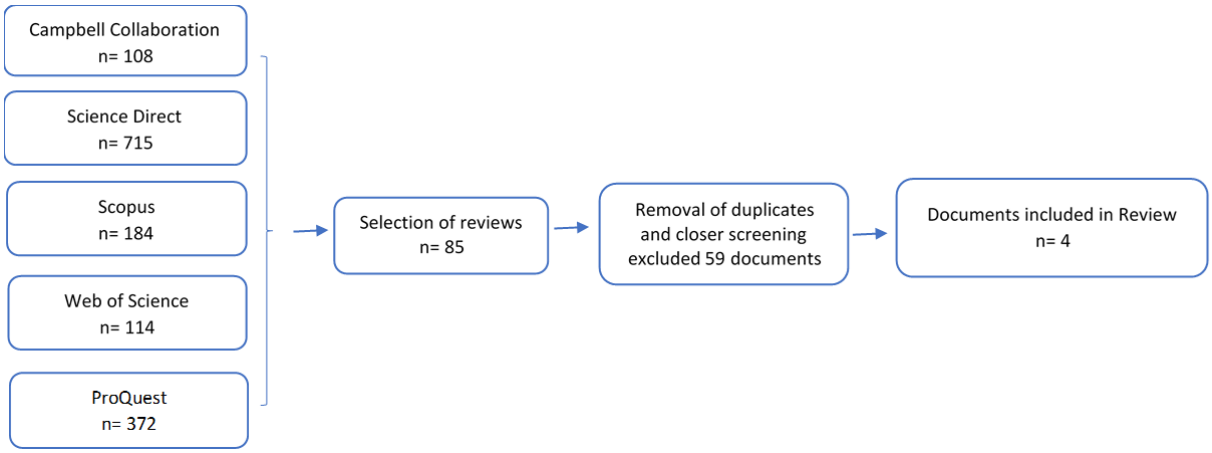
defence) AND (design OR management) AND (effective OR tested OR analysed OR results OR outcome OR trial OR study)

AND ("public spaces" OR "urban spaces" OR "community spaces") AND ("crime prevention" OR security OR protecting) AND (implement OR tested OR pilot outcome)

Figure 9.4: Search Results for the Design and Management of Public Spaces



Focus Area-Specific Notes

There was a significant volume of literature which related to disaster and climate change management, but unfortunately this had to be excluded as it represented too large a research area and was not directly relevant to our search parameters. Additionally, there was a great deal of literature concerning smart cities, or sustainability within cities, but these were also excluded unless they specifically addressed crime prevention initiatives relating to urban security. One area that proved to be relevant to our research goals but did not fall directly within our search parameters was literature which discussed perceptions of safety within the community. There was a large body of articles and literature which measured or evaluated in some manner the sense of safety that certain areas generated within the community, and specifically within certain populations (typically more vulnerable populations). This literature was closely examined to determine if specific interventions or strategies were discussed in relation to these assessments and were only included if they provided a detailed insight into what elements helped to establish a sense of security. We also chose not to include any transportation related literature, as transportation related issues can fall within both public and private ownership depending on the city or municipality and presents different urban security concerns than public spaces specifically.

9.3 Interviews with Partner Cities and International Experts

To supplement the review of the scholarly knowledge base, we conducted interviews with a number of key stakeholders. Broadly, these fell into two categories and served somewhat different yet

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complementary purposes. First, interviews with practitioners working in the six partner cities were conducted to inform our understandings of the cities, their developmental trajectories, contemporary needs, challenges and capacities for innovation in urban security. Second, interviews with international experts were designed to draw cross-cutting lessons and insights into changes, trends and developments over time from prominent individuals who have been intimately involved in the production and utilisation of the research knowledge base in crime prevention and urban security over a number of years (see Table 9.1).

Table 9.1: International Expert Interviews

Name	Organisation	Position	Date
Heiko Berner	Salzburg University of Applied Sciences	Professor	17/11/2021
Patrick Charlier	UNIA	Director	6/10/2021
Caroline Davey	Design Against Crime Solution Centre, University of Salford	Professor	30/112021
Jacques de Maillard	Centre de Recherches Sociologiques sur le droit et les Institutions Pénales (CESDIP)	Professor / Director	7/12/2021
Jaap de Waard	Dutch Ministry of Justice and Security, Law Enforcement and Crime Prevention	Director	26/11/2021
Paul Ekblom	Design Against Crime Research Centre, University of the Arts, London	Emeritus Professor	5/11/2021
Barbara Holtmann	Fixed Africa	Director	27/09/2021
Elizabeth Johnston	European Forum for Urban Security (Efus)	Director	14/12/2021
Gloria Laycock	University College London	Professor	4/10/2021
Nedžad Moćević	Salzburg University of Applied Sciences	Researcher	17/11/2021
Markus Pausch	Salzburg University of Applied Sciences	Professor	17/11/2021
Ken Pease	University of Huddersfield	Emeritus Professor	24/11/2021
Rossella Selmini	University of Bologna	Professor	9/11/2021
Nick Tilley	University College London	Honorary Professor	10/12/2021
Jan van Dijk	University of Tilburg	Emeritus Professor	12/11/2021
Sirpa Virta	Tampere University	Professor	13/12/2021
Irvin Waller	University of Ottawa	Emeritus Professor	1/10/2021
Frank Weerman	Netherlands Institute for the Study of Crime and Law Enforcement (NSCR) and Erasmus University Rotterdam	Professor	6/01/2022
Andrew Wootton	Design Against Crime Solution Centre, University of Salford	Director	30/12/2021

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INNOVATIVE APPROACHES TO URBAN SECURITY

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