



D1.1 Literature review on Social Innovation for Security Perception and Security Behaviour

Version 1.0

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About CO-SECUR: Co-creating urban security solutions in Europe

CO-SECUR is a 3-year Horizon Europe project that aims to improve citizens' security perception and behaviour in public spaces, especially at large events and crowded areas, by actively engaging them to co-create innovative security solutions.

The project will bring together existing knowledge, provide concrete tools and capacity-building activities, and present evidence-based results to promote good policy decisions. Its most important outcome will be the co-creation of a Societal Development Plan (SDP) to encourage the use of innovative security solutions that are sustainable, scalable, and effective.

Project consortium

The CO-SECUR consortium, led by Kveloce, brings together 10 multidisciplinary partners with expertise in participatory research, public engagement, and mixed methods. The selection of partners from 9 European countries – Spain, Belgium, Finland, Germany, Portugal, Romania, Poland, Greece, and Lithuania reflects the project's goal to address the complex diversity of laws, security measures, politics, and social realities of different European regions.

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Authors: Laura Llop PhD, Gertrudis Fornés PhD, Katri Laakso, Maria Mekri, Meike Hecker, Anna Rau, Carina Dantas, Paola Bello, Harm op den Akker PhD, Natália Machado, Andrea Marinho, Lucia Cristea, Beata Dec, Aleksandra Kamińska, Michal Woch, Dinos Nikolaidis-Konstas, Andrius Jaržemskis, Ieva Girdvainienė, Eglė Kalašnikovaitė, Alexia Papadimitriou, Marie Montaldo, Rebeca Lucas and Maite Ferrando, PhD.

Reviewers (peer-review): Beatriz Vallina (KVC)

Advisory Board members (informal feedback): Tim Lukas, Felix Munger, Tina Silbernagl, Nicolas Sklavos, Fabio Naselli, Eva Martinez Cruz

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List of abbreviations

This is a list of abbreviations used hereinafter for the purposes of this document.

Term	Definition
AES	Association of Security Companies
AI	Artificial Intelligence
CPTED	Crime prevention through environmental design
IoT	Internet of Things
RRI	Responsible Research and Innovation
SDP	Societal Development Plan
SIS	Social Innovation in Technology
SDP	Societal Development Plan

Summary

This deliverable presents a systematic literature review conducted in the framework of the CO-SECUR project, which aims to promote Social Innovations in Security (SIS) to improve security in public spaces and mass events. The review addresses the emerging and critical issue of promoting participatory, innovative and citizen-centred security measures in Europe.

The aim of this deliverable is to provide an overview of the existing SIS literature, focusing on how social, technological and policy innovations can improve safety in public spaces. The review aims to inform the further work of the project, in particular the development of co-created tools and guidelines to address safety challenges through participatory approaches.

The scoping review followed a structured methodology that included defining a clear research question, establishing inclusion and exclusion criteria, conducting a comprehensive search of academic and grey literature databases, and synthesising findings. Results were synthesised collaboratively using standardised data collection forms.

The review identified 46 peer-reviewed and 62 grey literature studies. Key themes included the dominance of authority-based approaches, the rise of technological solutions, emerging participatory initiatives and the key role of public perception and trust in security measures.

The results highlight the need for co-creation and participatory governance to improve public trust, align security measures with societal needs, and improve perceptions and security behaviours. The review underlines the importance of bridging gaps between regions and fostering a participatory security culture through education, capacity building and inclusive frameworks.

1. Introduction

Security has emerged as one of the most pressing concerns for European citizens in recent years, with perceptions of security steadily declining. According to the Special Eurobarometer report "*Europeans' Attitudes towards Security*", fewer Europeans now believe that Europe is a safe place compared to previous decades. Additionally, Eurostat data² highlights significant disparities in feelings of security and satisfaction with public spaces across different countries and levels of urbanisation. Interestingly, the perception of insecurity often has a greater impact on individuals' well-being than actual physical threats, underscoring the importance of addressing public perceptions of safety alongside objective security measures.

In this context, the objective of **CO-SECUR** is to foster the adoption of **Social Innovations in Security (SIS)** to improve safety in public spaces, particularly in crowded places and during large-scale events. The project will deliver a comprehensive **Societal Development Plan (SDP)** to promote responsible innovation principles, trust-building, and co-produced security solutions. By focusing on participatory approaches, the project seeks to enhance safety perceptions, behaviours, and overall public trust in security measures.

The main research questions (RQ) that guide the objectives of the project are the following:

RQ1. What are the characteristics and key elements (co)determining the capacity and effectiveness of socially innovative security solutions for fostering the citizens' perception of security?

RQ2. How the Quintuple Helix actors – and in particular citizens – are being actively and participatively involved in the co-creation of processes, measures, and solutions in the field of security in Europe? And how they can be successfully and effectively involved during the whole co-creation process in security solutions for public spaces?

CO-SECUR's main outcome, the **Societal Development Plan (SDP)**, will foster and accelerate the adoption of social innovation based on Responsible Research and Innovation (RRI) principles in security solutions for public spaces, providing a comprehensive framework for understanding and implementing social innovation in security across Europe. The SDP will include lessons learnt, recommendations, best practices, and insights for decision-makers. For details on the project structure see Figure 1.

¹ Migration and Home Affairs. (2018). Europeans' attitudes towards security. European Commission. <https://data.europa.eu/doi/10.2837/889432>

² https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Quality_of_life_in_Europe_-_facts_and_views_-_economic_and_physical_safety&oldid=400085

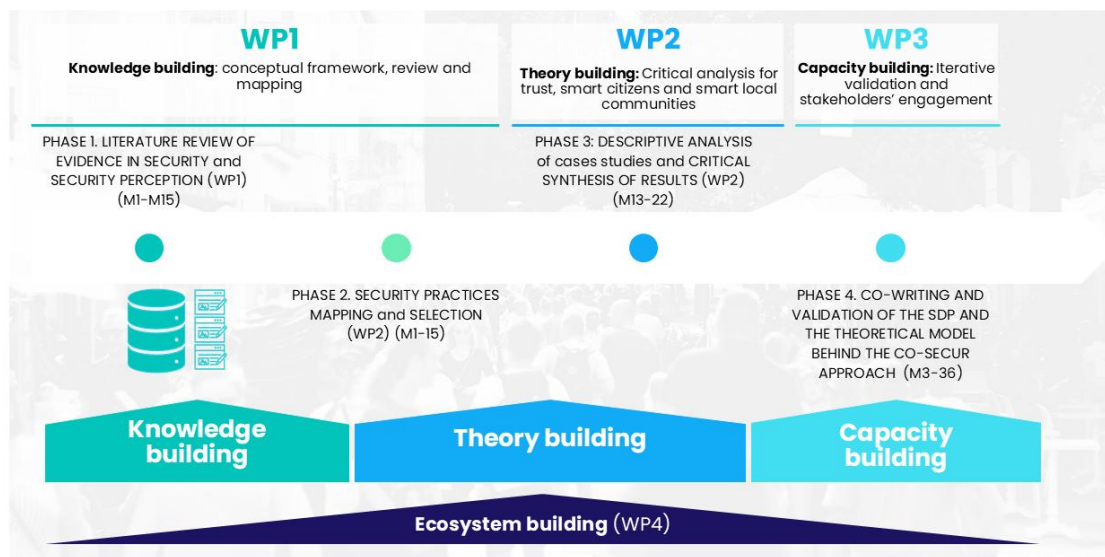


Figure 1: The Methodology Scheme and Concept Flow from the CO-SECUR Description of Action.

The different tasks and outcomes of CO-SECUR are related to each other, as shown in Figure 2. The figure shows the two main “pillars” – the literature review on the one hand, and the SIS case study mapping on the other. Ultimately, both pillars provide input to the Societal Development Plan (SDP) developed in WP3, one of the project’s main outcomes. The literature review and case study mapping are thus two parallel tracks that provide complementary input to the SDP.

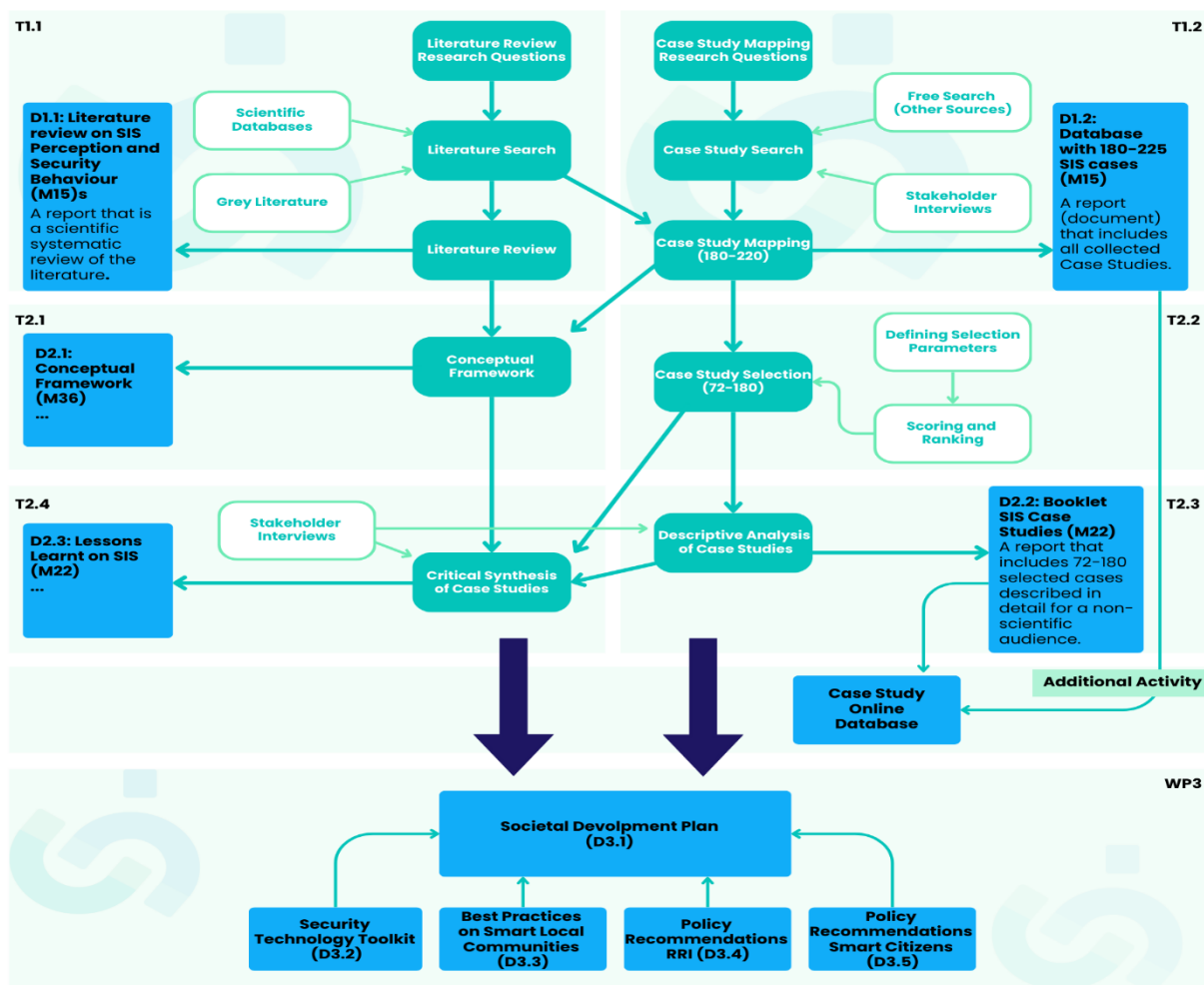


Figure 2: Flow-chart of CO-SECUR Project Outcomes and their interdependencies.

2. Definitions

Below is a list of definitions for key terms that have been agreed upon by the Consortium partners and will be used throughout the project and as a conceptualisation of the key terms that guided the review.

Social Innovation in Security (SIS): Refers to practices and processes that involve social, economic, technological, governance and/or policy innovations based on human needs with the aim of improving people's security (including security perception and behaviour). These solutions must be innovative, transferable, and scalable, and must be co-created through participatory processes and from a multidisciplinary perspective.

Security has been defined as *'the condition of being protected from or not exposed to danger; [...] a feeling of safety or freedom from or absence of danger'*³. It is a basic right for citizens that must be protected. Security is the cornerstone of a stable and prosperous society. Good internal security means that the population can enjoy the rights and freedoms guaranteed by the legal system without fear or insecurity caused by crime, disorder, accidents and national or international phenomena.

Safety: This focuses on protection against accidental or unintentional risks, such as natural disasters, workplace accidents, structural failures or health problems. This term refers to conditions of well-being and prevention of harm in everyday situations, so its focus usually includes regulatory measures, emergency protocols and safety standards in infrastructure and products.

Societal Development Plan (SDP). It refers to "a comprehensive plan that focuses on enhancing the quality of life of residents of a community" helping to "provide direction for future decisions" built through the "collaborative efforts of residents, organisations and government" (in the case of CO-SECUR, through the collaboration of the [Quintuple Helix + media](#)), and being its strength its ability to "engage residents, mobilise the community and reinforce and build upon the work already being done"⁴

Co-design is a model in which citizens are not only recipients of measures, but also actively participate in their design, implementation and evaluation. This approach implies shared governance in which the community, together with authorities and other key actors, assumes a leading role in identifying problems and generating solutions adapted to local needs.

Cross-sector collaboration refers to cooperation between policies and strategies. Although this model may include citizen participation, it generally follows a structure led by government or specialised entities, in which citizens play a consultative or secondary role.

Case study: an in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular project, policy, institution, programme, or system in a "real life" context⁵.

3. Aim of the deliverable

This deliverable presents the findings of a **scoping literature review on Social Innovations in Security** within **Work Package 1 (WP1)**, which is dedicated to building the conceptual and

³ European Commission "A Secure Europe in a Better World: European Security Strategy", Brussels, 12th December 2003, available at: <http://www.consilium.europa.eu/uedocs/cmsUpload/78367.pdf>

⁴ sustainabledevelopment.un.org/content/documents/3179SVG.pdf

⁵ Simons, H. (2009). Case study research in practice. London: SAGE

practical knowledge needed to inform CO-SECUR's subsequent tasks. The review addresses a critical gap in existing research by exploring how social innovations can contribute to security solutions that are both effective and citizen-centered.

Given the limited systematisation of SIS within existing EU literature, the primary objective of this review was to collect and synthesise evidence from peer-reviewed studies and grey literature covering the period from 2012 to the present. The review focused on Social Innovations in Security that are designed to prevent, detect, and respond to threats in public spaces, with particular attention to the nine partner countries involved in CO-SECUR: Spain, Germany, Portugal, Finland, Romania, Lithuania, Greece, Belgium, and Poland. However, the scope of the review was not limited to these countries to ensure a broader and more representative sample.

In addition to mapping SIS practices, the review also explored citizens' perceptions of security, security behaviours, and models of security perception to enrich the project's theoretical foundation. The findings were, in some cases, relevant to T1.2 and will directly inform the development of Work Package 2 (WP2), which focuses on co-creating practical tools and guidelines to improve safety solutions in public spaces.

A key step in conducting this review was establishing a shared definition of **SIS** among the CO-SECUR partners. This definition was crucial to ensure consistency in the review process and alignment with the project's objectives. After thorough discussion, the partners agreed on the following definition that has been adopted to guide the research activities of the project (and was included in the previous section):

SIS refers to practices and processes that involve social, economic, technological, governance and/or policy innovations based on human needs with the aim of improving people's security (including security perception and behaviour). These solutions must be innovative, transferable and scalable, and must be co-created through participatory processes and from a multidisciplinary perspective.

This definition guided the selection and analysis of literature, ensuring that the review focused on initiatives that align with CO-SECUR's mission of promoting human-centered security solutions.

By bridging the gap between academic research, policy, and practice, the literature review here presented contributes to the overall aim of CO-SECUR to drive forward responsible social innovation in security, ultimately fostering safer, more inclusive public spaces across Europe.

4. Research Focus

Social innovation in security represents a transformative approach that emphasizes collaboration, inclusivity, and adaptability in addressing complex urban safety challenges. As security remains a top concern for EU citizens, social innovation encourages participatory processes where diverse stakeholders including citizens, policymakers, researchers, and civil society co-create security solutions that are responsive to local needs

and socio-demographic realities. By involving the public in both diagnosing security issues and designing interventions, social innovation enhances public acceptance, trust, and ownership of security measures. This participatory approach leads to solutions that are not only more effective and context-specific but also more sustainable over time, as they reflect the lived experiences and priorities of the community.

A scoping review methodology was selected to provide a comprehensive overview of the existing literature on social innovations in security, particularly within the context of public spaces and mass events. This approach allows for mapping a potentially large and diverse body of research to identify key themes, gaps, and trends in the field. The review is designed to address the following research objective:

To identify studies focusing on social innovations in safety and security for public spaces and mass events that have been developed through bottom-up approaches, public participation, or focused public engagement.

The review focuses on research that explores these topics primarily from a theoretical perspective, aiming to build a foundational knowledge base that will support the project's subsequent tasks.

Research Steps

To ensure a **comprehensive, transparent, and reproducible process**, the scoping review following the PRISMA-ScR⁶ guidelines for scoping reviews involving the following key steps

1. **Defining the Research Question:** the primary research question was formulated to guide the review process and ensure a focused approach to identifying relevant studies.
2. **Defining the Protocol (Inclusion and Exclusion Criteria):** a protocol was established to specify the criteria for selecting or excluding studies. This ensured consistency and objectivity throughout the review process.
3. **Search Strategy:** a comprehensive search was conducted using academic databases, general search engines, and institutional websites. The search was designed to be transparent and reproducible, ensuring that the methodology could be replicated in future research.
4. **Selection Process:** the selection of studies was conducted in two steps:
 - **Step 1:** Screening titles and abstracts to identify potentially relevant studies.
 - **Step 2:** Conducting a full-text review of the selected studies to confirm their relevance.
5. **Data Extraction:** relevant information from the selected studies was extracted using data collection forms tailored for each step of the review. These forms were managed by the WPI task leader (UVEG) to ensure uniformity in the data collection process.

⁶ Tricco, AC, Lillie, E, Zarin, W, O'Brien, KK, Colquhoun, H, Levac, D, Moher, D, Peters, MD, Horsley, T, Weeks, L, Hempel, S et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Ann Intern Med.* 2018;169(7):467-473. doi: 10.7326/M18-0850

6. **Synthesis of Results:** each project partner was responsible for drafting a summary of their findings based on the studies they reviewed. The WPI leader (UVEG) provided a template to guide the synthesis process, ensuring consistency across partners. The final synthesis was conducted in English and aligned with the key questions outlined in the review protocol.

Inclusion of grey literature

Given the possibility of limited peer-reviewed studies on social innovations in security, the review also included an analysis of grey literature. Grey literature refers to non-commercially published documents that may be more challenging to access but are valuable sources of information, particularly in niche fields like security innovation.

Key characteristics of grey literature include:

- Limited distribution and small print runs.
- Lack of traditional publication standards (e.g., ISBN, ISSN).
- Targeted content aimed at specialised audiences.
- Lack of formal bibliographic control (e.g., impact indices).

The grey literature review was conducted using general search engines (e.g., Google) and institutional websites (e.g., national security ministries, public and private security organisations). The same keywords used for the peer-reviewed literature search were applied to ensure consistency in the review process.

By integrating grey literature, the scoping review provides a more holistic understanding of the field, capturing both academic perspectives and practical insights from real-world applications. This dual approach ensures that the project's knowledge base is robust, well-rounded, and applicable to a wide range of contexts.

5. Methodology

The scoping review methodology aimed to provide a comprehensive and systematic overview of **Social Innovation in Security (SIS) in Public Spaces** across Europe. Each partner contributed by conducting a literature search within their respective countries, covering both **peer-reviewed studies** and **grey literature** to ensure a wide and diverse knowledge base. The search was conducted in national languages by the project partners, while searches in English were centrally coordinated by UVEG-Polibienestar.

Search strategy

The search strategy involved a combination of academic database searches and grey literature reviews to capture both scholarly publications and practical, non-commercially

disseminated documents. The partners focused on gathering theoretical and empirical studies relevant to social innovation in security, particularly in the context of public spaces and mass events.

To ensure consistency, partners followed a structured protocol covering the following steps:

1. Search in Academic Databases
2. Search for Grey Literature
3. Application of Inclusion and Exclusion Criteria
4. Selection of Relevant Studies
5. Data Extraction and Synthesis

The partners conducted the academic search using databases (Web of Science, PsycINFO and Scopus). Searches in English were led by UVEG-Polibienestar, while each partner conducted additional searches in their national languages, ensuring the cultural and regional relevance of the results. In some cases, partners did not have access to one of the databases and used national databases instead.

For grey literature, the review was conducted using general search engines such as Google, along with websites of national security ministries and public/private security organisations. The grey literature search aimed to identify policy documents, guidelines, reports, working papers, conference proceedings, and glossaries. The search covered publications from 2012 to the present, ensuring that the review captured recent developments in SIS. The following keywords and subject headings were used across all searches. The same keywords were applied for the search of peer-reviewed articles and for grey literature in national languages.

- Social innovation
- Responsible Research and Innovation (RRI) framework
- Public spaces / crowded places
- Mass events
- Security technology
- Security solutions
- Security behaviour
- Security perception
- Co-creation/participatory process/ bottom-up approach

Some of the search strategies for Web of Science, SCOPUS and PsycINFO are shown below:

Scopus: 'Social innovation' (Topic) AND 'Security' (All Fields) AND 'Public Spaces' OR 'Mass Events' OR 'Big Events' AND 'Security Behaviour' AND 'Security Perception'

WOS: 'Social innovation' (Topic) AND 'Security' (All Fields) AND 'Public Spaces' AND 'Mass Events' OR 'Big Events' AND 'Security Technology' AND 'Security Behaviour' AND 'Security Perception' AND 'RRI' OR 'Bottom-up Approach' OR 'Co-creation'.

PsychINFO: abstract(security) AND abstract (public spaces) OR (social innovation) AND abstract(technology) (only peer review studies, English, and 2012-2024)

Eligibility criteria

The review included peer-reviewed studies and grey literature that met the following inclusion criteria:

Inclusion Criteria:

- Studies published between 2012 and the present.
- Focus on the European Union, particularly the nine project partner countries (Spain, Germany, Portugal, Finland, Romania, Lithuania, Greece, Belgium, and Poland) and the United Kingdom.
- Include policy documents, reports, and conference proceedings from grey literature.
- Address bottom-up, co-creation, public participation, or public engagement approaches in security.

Exclusion Criteria:

- Studies focusing on general public perceptions of security without innovation-related content.
- Opinion letters, editorials, or commentaries.
- Doctoral/Master's theses⁷.
- Publications prior to 2012.
- Studies for which full text was not available.

Selection of studies

The search results were compiled into bibliographic management software (e.g., Mendeley, RefWorks, EndNote, Zotero) to avoid duplication. The selection process involved two rounds of screening:

1. **First Round** (Title/Abstract Screening):
Abstracts were retrieved if the title and abstract met the inclusion criteria.
2. **Second Round** (Full-Text Screening):
Full texts were reviewed to confirm the relevance of the selected studies.

Studies that did not meet the criteria were excluded. For grey literature, all documents that met the inclusion criteria were retained.

⁷ PhDs had to be excluded because they contained some references included in the reviewed literature, so they might be of no interest

Data extraction procedure

Data extraction was carried out using standardised forms, which were designed for both peer-reviewed and grey literature searches. The forms were tailored for each stage of the review to ensure consistent and accurate data collection. These forms were created using Google Forms and automatically saved by the task leader (UVEG-Polibienestar). All forms were completed in English, even when the searches were conducted in national languages.

The following forms were used:

Form	Purpose
Form 1	Peer-reviewed studies (First Round)
Form 2	Peer-reviewed studies (Second Round)
Form 3	Grey literature (First Round)
Form 4	Grey literature (Second Round)
Form 5	Literature Review Data Synthesis Template

Forms used for data extraction are available in Annex I

Data Synthesis and analysis

The partners provided a narrative synthesis of the findings from both peer-reviewed studies and grey literature using a template provided by the task leader (UVEG-Polibienestar). The synthesis template ensured a uniform structure across contributions and focused on addressing the key research questions posed in the scoping review. The synthesis was conducted in English and served as the basis for further analysis in subsequent project tasks. The template used for the narrative synthesis of the findings can be found in Annex I.

6. Results

In the first round, 153 peer-reviewed studies and 119 grey literature studies were found across Europe, and 46 peer-reviewed studies and 62 grey literature studies were found in the second round.

Among the countries examined, Poland found the highest number of studies in both peer-reviewed and grey literature. In the first round, Poland reported 25 peer-reviewed studies and 28 grey literature sources, and the studies included in the second round were 15 peer-reviewed and 6 grey literature studies. Portugal found 6 peer-reviewed studies and 11 grey literature papers in both rounds.

On the other hand, countries such as Germany, Spain and Greece found fewer results in the review, especially in the peer-reviewed literature. In particular, Spain and Germany found no peer-reviewed literature written in their national languages in either round. This could be

attributed to the recent nature of the topic examined in these countries and that perhaps the studies were written in English. Countries such as Romania, Lithuania and Belgium found few studies that met the inclusion criteria for both, peer-reviewed studies and grey literature. The results underscore the geographical variation in research output, highlighting both the availability of literature in different formats and the emerging focus on certain topics in various European nations. The Table 1 shows the total and country-by-country data for peer-reviewed studies and grey literature.

Table 1: Total and country-by-country data for peer-reviewed studies and grey literature.

Country	Peer-reviewed		Grey literature	
	First round	Second round	First round	Second round
Europe	104	12	18	13
Spain	0	0	10	6
Finland	5	0	20	3
Germany	0	0	21	9
Portugal	6	6	11	11
Romania	5	5	3	3
Poland	25	15	28	6
Greece	2	2	6	6
Lithuania	4	4	2	2
Belgium	2	2	3	3
TOTAL	153	46	119	62

A list of all the studies included in this review, both peer-reviewed studies and grey literature, can be consulted in Annex II and Annex III.

Results by country

In the results section, the main conclusions and key findings are presented, separated by country and at the European level. For the interpretation of the results, it should be considered that in some countries there were relatively few eligible studies and therefore no definitive statements can be made, only approximations.

6.1.1. Spain

In Spain, no peer-reviewed studies were found that met the inclusion criteria in the national language. In response to the research questions about social innovation in security and its impact on public spaces, several key themes emerge from the data extracted from the grey literature in the Spanish context. These themes highlight both technological advances and community-driven initiatives, especially in public security and perceptions of security.

Key Findings

Socially innovative security initiatives in Spain emphasise collaboration, technology integration and public awareness. Effective solutions prioritise cybersecurity, especially in the context of the Internet of Things (IoT) and artificial intelligence (AI). These technologies are seen as vital for enhancing security measures, such as surveillance systems, but must be designed with robust protection against cyber-attacks to ensure public trust. In addition, sustainability is a growing concern, with the integration of environmentally friendly technologies. A key feature of these innovations is cooperation between the public and private sectors, exemplified by the partnerships promoted by the Spanish Association of Security Companies (AES). These initiatives encourage industry stakeholders to collaborate with governments, research institutions and the public to ensure that security solutions are both advanced and accessible. Although most of the initiatives identified do not include a participatory methodology, there is a general change in attitude and an awareness on the part of those implementing these measures of the importance of involving the target groups from the conception of the security measures. The 'Puntos Violeta' initiative exemplifies a bottom-up approach to security in public spaces, where citizens, in particular women, are actively involved in raising awareness and assisting in cases of sexual harassment and assaults at mass events. These spaces, usually organised by feminist associations and volunteers, aim to provide a safe environment at festivals and public gatherings, offering support, information and counselling to victims of gender-based violence. In addition, local governments, such as the City Council of L'Hospitalet de Llobregat, have promoted community mediation services, integrating citizens in conflict prevention and resolution, further supporting the idea that community participation is fundamental to improve safety.

Conclusions

In Spain, security perception is strongly linked to public involvement in security measures. Initiatives like the "Puntos Violeta" and other community-based projects help shift public perception by directly engaging citizens, boosting awareness and trust in public security. While innovations such as AI and IoT are enhancing public security, challenges related to privacy and cybersecurity persist.

Prominent social innovations focus on preventing gender-based violence in public spaces, especially during mass events. The "Puntos Violeta", established in several cities, provide support and reporting spaces for women experiencing sexual assault. These initiatives

contribute to greater social awareness and align with national policies like the State Pact against Gender Violence.

Key findings highlight the importance of cross-sector collaboration, citizen involvement in safety efforts, and attention to both technological and social aspects of security. Public perceptions and behaviour towards security have been positively influenced by initiatives like “Puntos Violeta” and the Artemis magazine.

Ensuring security in public spaces and mass events in Spain requires a multifaceted approach that combines public and private management, technological innovation, and active citizen participation. By fostering collaboration among stakeholders and maintaining a balance between effective measures and public comfort, Spain continues to enhance its capacity to safeguard its vibrant public life which includes festivals, concerts, sports events, and large gatherings in urban centers. The inclusion of community perspectives and the integration of advanced technologies will remain key to addressing future challenges in this field.

6.1.2. Belgium

Key findings

The literature review conducted in Belgium did not yield findings directly relevant to social innovations in security for public spaces and mass events, particularly those developed through bottom-up approaches, public participation, or focused public engagement. While an extensive body of grey literature was identified, including government reports, policy briefs, and regional mobility plans, none specifically addressed the intersection of security and social innovation within the scope of this study. This absence of findings is a noteworthy result, as it highlights a potential research gap in Belgium regarding participatory security solutions for public spaces.

Among the reviewed documents, the Belgian Report on Science, Technology, and Innovation (BRISTI) (2021) provided a broad overview of Belgium’s research and innovation landscape, emphasising cross-sectoral policy coordination, mission-driven research agendas, and the role of diverse actors in fostering transformative change. However, while the report acknowledged the importance of addressing societal challenges such as climate change and public health emergencies, it did not explicitly address security innovations for mass events or the role of public participation in shaping security policies. Similarly, the Public Sector Innovation through Collaboration (PSI-CO) project explored the conditions under which collaborative governance arrangements can drive policy and service innovations. Although this study examined mechanisms of cooperation between various stakeholders, it lacked a focus on security-related applications in public spaces or mass gatherings.

Another relevant document, the Good Move: Regional Mobility Plan for the Brussels-Capital Region (2020), provided strategic guidelines for improving urban mobility and transportation infrastructure, with a focus on sustainability, accessibility, and citizen engagement. While participatory planning was a key component of this initiative, the plan

did not extend its scope to security measures for large public events or the co-creation of safety strategies. Additionally, Policy Brief #46: Autonomous Vehicles in Urban Settings (2021) examined the integration of self-driving vehicles into Belgian cities, discussing regulatory challenges, testing strategies, and societal impacts. Although the brief touched on the implications of autonomous mobility for urban safety, it did not engage with social innovations in security or participatory safety measures.

Conclusions

The lack of literature specifically addressing social innovations in security for mass events in Belgium suggests that Belgium's security policies remain largely institution-driven, with limited emphasis on direct citizen involvement. This gap indicates an opportunity for further research into how participatory security innovations could be better integrated within Belgium's policy landscape, particularly in the context of large-scale events and public space management. Ultimately, the absence of relevant findings reinforces the notion that a lack of literature is itself a valuable insight, revealing areas where future studies and policy developments could contribute to a more inclusive and socially innovative approach to public security.

6.1.3. Finland

The literature review in Finland revealed that peer-reviewed studies focusing on social innovations in security for public spaces and mass events are scarce. Finnish researchers tend to publish in English, which likely contributes to the lack of Finnish-language studies on this topic. However, there is significant grey literature and a strong culture of co-creation through national platforms such as Innokylä. Security initiatives in Finland often involve broad collaboration between authorities and citizens, particularly through data-driven technologies and participatory processes.

Key Findings

As mentioned, the review conducted in Finland revealed a limited availability of peer-reviewed studies and an extensive body of grey literature on security innovations. Despite the lack of relevant peer-reviewed studies in key academic databases such as PsycINFO, Scopus, and Web of Science, the review highlighted that Finnish researchers often publish in English, making national studies less accessible in Finnish databases. This practice, while broadening the international reach, restricts the availability of local studies in national contexts.

Finland's grey literature, however, presents a wealth of information, including policy documents, local government initiatives, and research reports that address various aspects of security innovations. Despite this, there is a noticeable lack of focus on social innovations in security specifically designed for mass events. The security solutions identified in the country are largely driven by authorities, with an emphasis on collaborative security plans. A prominent example of innovation is the Sure Tampere initiative, which employs advanced technologies like sensors and digital twins to enhance crowd

management and improve the perception of safety in public spaces, such as the Nokia Arena.

Finland stands out in its development of participatory processes, which are well established across the country. The co-creation platform Innokylä, for instance, supports the development of socially innovative projects, yet the safety of mass events remains a niche area within this broader context. Additionally, participatory budgeting programs offer citizens opportunities to propose security-related projects, fostering engagement in the decision-making process regarding public safety.

In terms of security perception, the review found that high trust in institutions like the police plays a significant role in shaping Finns' sense of security. However, emerging non-traditional threats such as climate change, hybrid threats, and disinformation are increasingly recognized as critical security concerns. Finland's strong comprehensive security culture also contributes to a heightened sense of emergency preparedness, although global crises in recent years have slightly diminished the overall perception of security.

Regarding security behaviour, Finland demonstrates a responsible and security conscious population, reflecting the country's proactive approach to public safety. However, security issues tend to be concentrated in specific groups, notably those affected by substance abuse. These findings underscore the importance of targeted security measures for vulnerable populations while highlighting the general high level of security awareness in Finnish society.

Conclusions

In Finland, social innovations in security are often implemented through broad collaboration between authorities and key stakeholders. However, most solutions remain authority-driven, with limited direct citizen involvement in mass event security. The Sure Tampere initiative stands out for using digital technologies to enhance security perception and behaviour. While there is a strong culture of co-creation in Finland, mass event security solutions are still underrepresented in social innovation projects. Future security innovations could benefit from more inclusive participatory processes and broader engagement of the public, particularly to address emerging non-traditional security threats.

6.1.4. Portugal

The literature review in Portugal identified peer-reviewed studies and grey literature related to security in public spaces and mass events. It must be noted that studies and grey literature that report social innovations that involve bottom-up approaches or public participation remain limited. It emerges that while security policies and solutions are often developed by authorities, co-creation processes and citizen engagement are starting to gain recognition as valuable tools to ensure sustainability and effectiveness of security practices.

Key Findings

The studies identified in Portugal mainly focus on urban planning and crime prevention through environmental design (CPTED), but they often lack specific references to social innovations in security. Grey literature in Portugal covers a broad range of security topics, such as mass event management, video surveillance, and urban security strategies. However, documents integrating public participation remain limited. Notable examples of grey literature include Regulation 003/2023 on mass event preparedness and response, the 'Sanus' project (2020), which addresses pandemic-related security in public spaces, the 'Security by Design' manual that highlights community policing practices in Lisbon, and participatory mapping initiatives focusing on women's safety and their perception of security in urban areas.

Several technology-based security solutions were identified, including video surveillance systems and digital mapping tools designed to track crowd movements and improve event security. The 'Sanus' project also provides a contactless security system during the pandemic. Some initiatives in Portugal incorporate citizen participation, notably through participatory budgeting programs and community policing projects. For example, the 'Security by Design' handbook and CPTED initiatives in Porto emphasize collaborative approaches to improving public space safety.

In the literature collected it is reported that the perception of safety in Portugal is influenced by personal experiences and expectations, and that involving citizens in the design of security policies can enhance their sense of security. It is also described that efforts to involve vulnerable groups, such as women and students, have helped improve perceptions of safety in public spaces. Security behaviour varies according to context and is influenced by external norms. Where clear security measures are in place, citizens tend to comply with them and exhibit predictable behaviours. Projects such as community policing have contributed to pro-social conduct in urban environments.

Conclusions

Portugal's approach to security in public spaces is currently mostly authority-driven, with increasing attention to co-creation processes. Participatory mapping, community policing, and participatory budgeting are promising examples of social innovation in security. However, more research is needed to identify best practices and foster broader citizen involvement. The literature highlights the importance of citizen engagement in improving both security perception and security behaviour, particularly through collaborative urban planning and crime prevention strategies.

6.1.5. Germany

The literature review in Germany revealed that social innovations in security for public spaces and mass events are rarely addressed directly in academic research. While crime prevention is a well-established topic, the integration of bottom-up approaches and citizen participation is less documented in peer-reviewed studies. Grey literature highlights

numerous initiatives that could be considered socially innovative, but they are often not labelled as such. Security solutions tend to focus on technical measures rather than social innovations.

Key Findings

The literature review revealed significant gaps in peer-reviewed research on social innovations in security for public spaces and mass events. Due to DEFUS's limited access to major research databases, the search relied on the University of Hamburg's library catalogue. As a result, few relevant peer-reviewed studies were identified, and those that were found focused more broadly on crime prevention and urban safety rather than on socially innovative solutions involving bottom-up approaches or public participation. This lack of literature reflects a broader trend in Germany, where social innovation is not yet a central theme in security-related academic research.

In contrast, grey literature provided a more comprehensive picture of security initiatives, policies, and projects aimed at enhancing public security. However, many of these initiatives, while socially relevant, do not explicitly label themselves as social innovations. For instance, the participatory redesign of a public square in Münster is a noteworthy example of a security initiative involving citizen engagement. The process involved local stakeholders, including residents, businesses, schools, and marginalized groups such as people dealing with addiction. The project aimed to improve the square's usability and safety through collaborative urban planning. Although this project embodies key characteristics of social innovation, it has not been documented in academic literature as such, illustrating a disconnect between practice and research in the German context.

Germany's security solutions tend to focus on technical measures, including video surveillance, crowd monitoring technologies, and escape planning for mass events. While these measures enhance safety from a technical standpoint, they lack the participatory element that defines social innovation. There are also examples of initiatives aimed at fostering citizen security perception and behaviour in crowded spaces. For example, awareness teams at public events, as well as safer spaces and drug testing services, provide direct support to individuals who feel vulnerable. These measures, while impactful, are rarely framed as socially innovative practices in the literature.

Citizen participation in security initiatives is becoming more prevalent in Germany, particularly through data-driven solutions. For instance, apps have been developed to capture real-time perceptions of safety from public transport users, allowing authorities to better understand the security concerns of different population groups. These tools help public transport providers implement targeted improvements based on feedback from passengers. Despite these promising examples, the literature still lacks comprehensive studies that explore the effectiveness of participatory security solutions or their impact on citizens' perceptions of safety.

Overall, the findings indicate that while Germany has a well-established framework for crime prevention and public safety, the integration of social innovations into security measures remains limited. There is a need for more research that explicitly addresses the

relationship between social innovation and security, particularly in the context of urban environments and mass events.

Conclusions

Germany's crime prevention policies are problem-oriented, addressing specific causes of feelings of insecurity, such as littering, graffiti, and poor lighting. However, bottom-up approaches and social innovations are still underdeveloped. Public participation in urban security planning is becoming more common, particularly through participatory budgeting and neighbourhood management initiatives. However, these efforts are not always recognized as social innovations. The Münster public square project stands out as a notable example of integrating the quintuple helix approach, but scientific documentation of such participatory processes is lacking.

Future research could benefit from exploring how prevention measures impact social change, focusing on perceptions of security, involvement of new actors, and behavioural changes in response to security measures.

6.1.6. Greece

The literature review conducted in Greece revealed a limited availability of peer-reviewed studies and grey literature focusing on social innovations in security for public spaces and mass events. Most of the identified documents were sourced from government websites, regional authorities, and academic institutions. However, there were very few studies addressing security through bottom-up approaches, public participation, or co-creation processes, which are central to social innovations in security.

Key findings

In Greece, there is a significant lack of sufficient national studies on social innovations in security. Most relevant documents are written in English to reach a broader audience, but few focus on the domestic context of Greece. Various security technologies and initiatives were identified, such as electronic ticketing systems, closed-circuit television (CCTV), and databases for tracking incidents. However, these initiatives are predominantly government-led, top-down approaches with minimal involvement from citizens. Educational initiatives aimed at fostering security awareness were noted, yet public trust and participation in security measures remain low, and there is a general lack of education on security behaviour among the Greek public. No initiatives co-created through participatory processes involving citizens were found, as security solutions in Greece are generally developed by government agencies without significant input from the public. The lack of diverse and accessible literature is a key challenge, as many Greek security experts write their studies in English, limiting the availability of national resources in Greek. Additionally, the low public interest and awareness in security-related issues may explain the absence of participatory approaches. Overall, the findings indicate that social innovations in security are not well-developed in Greece, and existing solutions largely rely on government-driven policies rather than collaborative, citizen-inclusive efforts.

Conclusions

A review of the literature in Greece reveals a significant gap in studies on social innovations in security for public spaces and mass events. Most of the papers identified are in English and lack a focus on the national context. Although some security technologies exist, such as CCTV and incident tracking systems, these are mainly top down and Government led initiatives, with minimal involvement of citizens. Co-created security solutions are lacking and citizen participation in security issues is low. In general, social innovations in security are underdeveloped in Greece, and government policies predominate over participatory approaches.

6.1.7. Lithuania

The literature review conducted in Lithuania revealed a limited number of relevant studies. Searches were performed across multiple academic databases, including Web of Science (WoS), PsycINFO, and Scopus. However, the results were sparse, with no studies found in WoS or PsycINFO, and only four studies identified in Scopus. Additionally, only two pieces of grey literature were found, which is insufficient to draw any substantial conclusions on the subject.

Key Findings

The review found that, although one paper discussed the potential use of urban planning tools to prevent security issues in public spaces, no studies presented technological solutions or initiatives that could directly foster citizens' security behaviours or perceptions in crowded areas. Moreover, while there were a few papers analyzing trends in security perception, none proposed practical solutions to improve it. The research also did not uncover any initiatives or projects co-created through participatory processes to enhance public security, which indicates a significant gap around citizen engagement and collaborative approaches.

Furthermore, no solutions involving the quintuple helix approach, especially with the involvement of citizens, were found in the literature. This suggests that the development of security measures in Lithuania may not yet involve the active participation of various societal sectors, including citizens. The lack of studies or initiatives addressing security behaviour or perception further highlights the need for more research in this area, especially regarding the development of security solutions through bottom-up approaches.

Conclusions

The literature on social innovations in security for public spaces and mass events in Lithuania is minimal, and the available studies primarily focus on analysing the current state of security rather than proposing actionable solutions. There is a clear gap in the literature concerning citizen participation, security behaviour, and perception, as well as the involvement of various societal actors in creating security solutions. Given that Lithuania is

a relatively small country, the scarcity of research in this area is understandable but indicates a need for further academic exploration to address these gaps.

6.1.8. Romania

The literature review in Romania identified limited peer-reviewed studies and grey literature focused on social innovations in security for public spaces and mass events. The security framework emphasizes top-down approaches by government authorities, with minimal involvement of citizens or bottom-up processes.

Key Findings

The literature review conducted in Romania revealed a limited number of peer-reviewed studies available in national databases. Most of the studies found addressed general security concerns rather than focusing on social innovations in security for public spaces and mass events. In terms of grey literature, some national strategies and local government initiatives were identified, but these documents are not well-documented or detailed.

Security solutions in Romania are primarily characterized by government-led initiatives. These include the installation of video surveillance systems in public spaces and educational campaigns run by the police and gendarmerie aimed at raising awareness about safety. However, these initiatives largely reflect top-down approaches, with minimal involvement of citizens or participatory processes.

Citizen participation is present to some extent through participatory budgeting initiatives, which allow citizens to propose improvements for public spaces. However, these initiatives seldom focus on security issues, limiting their potential impact on social innovations in security.

A common element found in the literature was the recognition of urban renewal projects, specifically those that transform abandoned or neglected spaces into community centers. These projects are seen as having the potential to reduce crime and promote a greater sense of safety within communities. Despite this, there remains a notable gap in the development of security solutions that incorporate bottom-up approaches or more direct citizen involvement.

Conclusions

The security framework in Romania relies heavily on government interventions with little evidence of participatory processes. There is a need for more citizen engagement and public awareness campaigns to improve security perception and behaviour.

6.1.9. Poland

The literature review in Poland revealed a limited focus on social innovations in security for public spaces and mass events. Most existing research and initiatives are dominated by top-down, institutional approaches led by government agencies, with little emphasis on

bottom-up or participatory processes. Although public safety is a priority, there is a gap in engaging citizens in the design and implementation of security solutions.

Key Findings

The systematic literature review revealed a limited number of peer-reviewed studies, most of which concentrated on the technical and administrative aspects of security management rather than social innovations. While there is some grey literature available, it primarily focuses on policing, event organization, and local government initiatives, with little emphasis on bottom-up approaches to security. In terms of security solutions, several general initiatives were identified, such as urban policing systems and volunteer-led peace patrols during events. Notable examples of security practices were the Pol'and Rock Festival and the Open'er Festival, which employ access wristbands and structured anti-terrorism procedures to enhance safety and manage crowd movement effectively.

While participatory initiatives like civic budgets exist in Poland, these programs rarely focus on the security of public spaces or crowd events. The review also explored security perceptions, noting that the perception of security among Polish citizens is heavily influenced by the visible presence of security services at events, peacekeeping patrols, and access control systems. However, there is a significant gap in interdisciplinary research regarding how individuals behave during emergencies, leaving uncertainties in understanding crowd behaviour and emergency responses. This lack of research contributes to an incomplete picture of security dynamics in public spaces and at mass events.

Conclusions

Poland's current security solutions for public spaces rely heavily on formal regulations like the Law on Security of Mass Events (2009) and institutional procedures. There is a need for greater citizen participation and more research on human behaviour during emergency situations to develop socially innovative solutions that effectively address both security perception and security behaviour.

6.1.10. Europe

Regarding the results in Europe, 10 peer review papers and 13 grey literature documents were included that met the inclusion criteria of the review. The studies included in the review examine key urban security themes and strategies, highlighting the importance of participatory governance, technology, and urban planning in addressing contemporary security concerns.

Key Findings

A recurring theme in the articles identified in Europe is the tension between top-down, authority-driven security measures and the growing recognition of the need for inclusive, bottom-up approaches. For example, in examining the role of public participation in the development of emerging security technologies, it becomes clear that the lack of ethical

and social consideration during the design phase often leads to public resistance. Studies suggest that meaningful public participation early in the development process can mitigate resistance and align innovations with societal values, thereby increasing the likelihood of adoption.

Studies also highlights the importance of aligning security innovations with local contexts. Studies on public perceptions of safety and avoidance behaviours, such as those related to women's experiences of public transport, highlight how factors such as gender, education and past experiences of victimisation shape perceptions of safety. These perceptions highlight the need for tailored safety measures that reflect the unique needs of specific demographic profiles, especially in urban settings where vulnerability can vary significantly.

In addition, the studies illustrate the critical role of preventive communication in building public trust and shaping security-related behaviours. For example, research on pre-event communications for counter-terrorism indicates that such efforts can increase public confidence in security services and improve compliance with security protocols during emergencies. Similarly, workplace studies show that training employees on evacuation procedures is a cost-effective way to improve perceived security, illustrating how knowledge dissemination can complement physical security measures.

Another significant idea relates to the development and application of technologies for vulnerable groups. Articles discussing technologies for older populations and people with disabilities reveal the systemic barriers these groups face, such as economic constraints, usability issues and social stigma. Addressing these barriers through inclusive design and stakeholder engagement is crucial to ensure that technological innovations in safety and security are accessible and effective for diverse populations.

Studies emphasise collectively the need to balance visibility and discretion in security measures. For example, while visible security measures such as armed police and CCTV can reassure the public, they can also increase fear if implemented without sufficient public communication. Getting this balance right is essential to create environments that feel safe without fostering anxiety or discomfort.

Overall, the documents emphasise the need for integrated, collaborative and innovative approaches to ensure that urban safety measures are effective, inclusive and sustainable, with particular attention to the inclusion of vulnerable groups and addressing their specific safety concerns through targeted interventions.

Similarly, urban planning, technology and participatory governance to promote safer public spaces emerge as a key theme in the documents analysed and different strategies are proposed.

Firstly, the incorporation of an inclusive perspective in urban design to accommodate the different users of public spaces. In this sense, the need to develop specific policies for vulnerable groups such as women, immigrants and the elderly and to ensure that their voices are heard in policy making is also highlighted.

Another aspect highlighted is the need to use crime prevention through environmental design to effectively address security challenges.

It is also important to address vulnerabilities in crowded places, transport hubs and major events by implementing shared best practices and common EU standards.

Another strategy is to use technologies such as CCTV, big data analytics and citizen safety applications to improve urban security. Smart technologies should also be used to promote an inclusive and community-driven security culture, while respecting data protection rules.

Most studies suggest fostering community participation in the co-design of security solutions, with a focus on shared responsibility and social cohesion, and promoting participatory governance mechanisms, such as neighbourhood watch and consultations, to align security policies with public needs.

Conclusions

The results emphasise the urgent need for a shift towards integrated, inclusive and contextualised approaches to urban security. Emphasising public participation at all stages of security innovation, from design to implementation, not only reduces public resistance, but also ensures that solutions are aligned with social values and diverse demographic needs. Technologies and urban planning strategies that prioritise inclusion, such as those that address the concerns of vulnerable groups, improve the effectiveness and fairness of security measures.

7. Discussion

Comparative analysis across countries reveals that while countries share common challenges in ensuring public security, their approaches to social innovation in security vary widely. Emphasising participatory processes, fostering cross-sectoral collaboration and addressing emerging security threats are key to improving public security globally.

Key Findings

The findings of the literature review provide crucial insights for addressing the central research question: How can social innovations contribute to effective, citizen-centred security solutions in public spaces and mass events? By systematically examining participatory security approaches across different European contexts, the review offers both theoretical and practical guidance on integrating social innovations into security frameworks. The results of the research in each country identified common themes and issues worth highlighting, which are described below.

The role of social innovation: Social innovation, characterised by co-creation and community engagement, is key to developing sustainable and inclusive urban security solutions. The literature reviewed supports the idea that social innovation in security is most effective when it is inclusive, context-sensitive and communicative. Evidence supports the fact that by prioritising participatory methods and aligning innovations with societal needs and values can improve public safety while building trust and cooperation.

Participatory interest increase: Although still limited, participatory approaches are gaining ground in many countries. Examples include participatory budgeting in Portugal and Romania, the use of co-creation platforms such as Innokylä in Finland, and community-driven initiatives such as ‘Puntos Violeta’ in Spain. These efforts reflect a growing recognition of the value of citizen participation in shaping security measures.

Public perception and trust: Public perception of security and trust in institutions are recurring themes in social initiatives, with different nuances. Finland's high level of trust in the police, Portugal's efforts to engage vulnerable groups and Spain's community-focused projects demonstrate that improving public trust is an integral part of effective security measures.

Levels of citizen participation: The results show diverse levels of citizen participation across countries. Spain and Finland stand out for their efforts to directly involve citizens through initiatives such as ‘Puntos Violeta’ and participatory platforms. In contrast, countries such as Greece and Lithuania show minimal citizen participation, with most security measures being driven by government entities.

Where social innovation is focused: There are specific topics depending on the country and/or region analysed. For instance, Spain has a focus on gender-based violence, while Germany social innovation actions are frequently related with participatory urban planning. Initiatives such as the ones we have mentioned emphasise the importance of addressing specific social challenges in public spaces through tailor-made solutions. In contrast, countries such as Romania and Poland show broader and less specialised measures that prioritise enforcement over innovative problem solving.

Cultural and structural contexts: The evidence analysed highlights differences linked to cultural and traditional security related backgrounds. Finland's culture of co-creation contrasts sharply with Greece's low public engagement and trust in security measures. Similarly, Lithuania and Romania's smaller scales of research reflect their limited resources but also highlight gaps in participatory frameworks compared to larger nations such as Germany and Spain.

Influence of sociodemographic variables on the perception of security in public spaces: The perception of security in public spaces is not a uniform experience, but is determined by a variety of intersecting sociodemographic factors, such as gender and race. These variables influence not only the way people assess potential risks in their environment, but also their mobility patterns, their interaction with public spaces and their trust in security measures. Gender has been studied as a determining factor in perceptions of security, and some research has shown that women report higher levels of insecurity in public spaces compared to men. This heightened sense of vulnerability is often related to concerns about harassment, assault and gender-based violence, especially in environments such as public transport, poorly lit streets and isolated urban areas.

Given these concerns, innovations in security must incorporate gender-sensitive approaches, such as participatory urban planning that includes women's perspectives, gender-sensitive policing and awareness-raising campaigns aimed at reducing harassment in public spaces.

Racial and ethnic minorities often experience public spaces differently due to factors such as racial discrimination, discrimination and social exclusion. Some studies indicate that people from minorities may perceive law enforcement differently, sometimes associating police surveillance with excessive surveillance rather than protection. To address this, decision-making processes should involve minority communities in shaping public security initiatives.

Emphasis on technological solutions: In several countries, technological innovations play a central role in security measures. For example, Spain's integration of IoT and AI, Finland's Sure Tampere initiative and Germany's reliance on video surveillance and crowd control illustrate the widespread adoption of digital tools to improve public security.

Prevalence of authority-driven approaches: Several countries rely heavily on top-down, authority-driven security measures. Some examples arise for instance from Greece, Romania and Poland. These measures typically involve government-led initiatives such as policing systems, regulations and institutional frameworks. While these approaches ensure structural coherence, they often lack effective citizen participation.

European countries take different approaches to social innovation in security. The technology-driven models (Finland, Germany) make heavy use of IoT, AI and digital twins, but there is less evidence of citizen participation. Participation-oriented models such as those in Portugal, Spain, and Belgium integrate community-led initiatives such as participatory budgeting and urban security. Authority-driven models (Poland, Greece, Romania, Lithuania) are based on top-down surveillance with minimal public participation. While public-private collaboration is strong in technology-driven countries, participatory security remains underdeveloped in centralised systems.

That said, participatory strategies in social innovations for security have also inherent limitations. First, citizen participation is often uneven, and certain demographic groups, such as disadvantaged communities or those with lower socioeconomic status, are often underrepresented in decision-making processes. Furthermore, participatory initiatives require time, resources and institutional commitment, which can be difficult to maintain in the long term. There is also a risk that participatory measures, if not properly structured, will become symbolic rather than having real influence, and that citizens will simply be consulted without their input leading to real policy changes. Lastly, balancing security concerns with public participation can be complex, as some security decisions require confidentiality and a rapid response, limiting the degree to which public input can be integrated.

Despite these challenges, refining participatory strategies through inclusive outreach, structured frameworks for citizen engagement and mechanisms to ensure responsiveness can improve their effectiveness and legitimacy in shaping security policies. The Table 2 below summarises the main findings of the SIS found in the countries under study.

Table 2: Summary of main findings of SIS across Europe

Technological Innovations	<ul style="list-style-type: none">IoT, AI for cybersecurity (Spain); Digital twins for crowd management (Finland)
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	<ul style="list-style-type: none"> • Crime prevention through technology (e.g., surveillance, escape planning) (Germany) • Some use of participatory governance in mobility and urban planning but lacks security focus (Belgium) • CCTV, electronic ticketing, security databases, surveillance-heavy approaches (Greece, Romania, Lithuania)
Citizen Participation	<ul style="list-style-type: none"> • Limited but growing (Spain, Finland); • Some data-driven public engagement tools (Germany) • Emerging participatory budgeting, urban planning, and bottom-up initiatives (Belgium, Portugal) • Minimal public engagement (Lithuania, Greece, Poland, Romania)
Public-Private Collaboration	<ul style="list-style-type: none"> • Strong (e.g., Spain's AES partnerships, Finland's co-creation platforms, Germany's local initiatives like Münster public square redesign) • Some collaborative security efforts within urban planning (Belgium, Portugal) • Predominantly state-driven security measures (Greece, Romania, Lithuania, Poland)
Perception of Security	<ul style="list-style-type: none"> • Technology enhances security but raises privacy concerns • Public involvement improves safety perception and trust • Security awareness is low, with little focus on education for security behaviour
Challenges	<ul style="list-style-type: none"> • Cybersecurity risks, ethical concerns around AI, lack of direct citizen participation in security initiatives (Germany, Spain, Finland) • Need for broader engagement, integration of security within participatory governance (Belgium, Portugal) • Severe lack of research and participatory security approaches (Lithuania) • Government dominance limits co-creation (Greece, Romania, Poland)

Thus, the results of the review validate the initial hypothesis that social innovation can be a powerful tool for improving safety in public spaces. The review shows that security solutions are more effective when they are participatory, context-sensitive and technologically adaptable. By addressing the key elements of the research question (effectiveness, citizen participation and sustainability), the results provide a solid basis for the next steps of the project.

Strengths and limitations of the review

The scoping methodology provided a comprehensive and systematic overview of the literature on social innovations in security across Europe, especially in public spaces and

mass events. Its design allowed for the inclusion of peer-reviewed studies and grey literature, ensuring a holistic understanding of the field. The inclusion of grey literature helped us to complement the findings in the peer-reviewed literature, given that in some countries it was very limited. It also helped to include documents that referred to good practices, policies or project results that otherwise would not have been considered. The involvement of multiple project partners who conducted the searches in their national languages was a significant strength, ensuring the regional and cultural relevance of the findings.

By integrating grey literature, the review captured real-world practices and policy initiatives often excluded from traditional academic reviews. This two-pronged approach enhanced the knowledge base and offered practical insights into how social innovations are applied in diverse contexts. The structured protocol ensured consistency and transparency, allowing for reproducibility of the methodology for future research.

The inclusion of a diverse set of databases and general search engines ensured that the review had a broad scope. The use of standardised forms for data extraction and coordination of the synthesis ensured uniformity and comparability between findings from different countries. In addition, the use of keywords related to bottom-up approaches and co-creation ensured that the review was closely aligned with the project objectives.

Despite its strengths, the scoping review faced several limitations. When interpreting the results, it is important to consider that some countries had relatively few eligible studies, and therefore, only approximations can be made rather than definitive conclusions. Geographical variation in research output was evident, with countries such as Poland and Portugal finding more studies compared to Germany, Belgium, Spain or Greece. This disparity probably reflects the emerging nature of the topic in some regions and the fact that relevant studies may be published in English rather than in national languages as well as the fact that countries with strong policy frameworks supporting participatory security measures may generate more academic and policy-oriented research, while those where security is primarily state-driven may have fewer studies focusing on social innovation.

Part of what might be driving the apparent disparity between countries in terms of social innovation in security could be the tendency for academic research to focus on topics of academic interest rather than practical, operational, real-world needs. That is to say, the differences observed in the literature may be less due to a real divergence in security practice in each country and more to the way in which researchers choose what to study and how to study it. Research agendas tend to be influenced by factors such as the availability of funding, academic prestige, theoretical trends and the interests of researchers, rather than strictly responding to the demands of the security sector or affected communities. In this sense, some countries may appear to be more advanced in social innovation in security simply because they have a stronger academic tradition in these subjects, while others may be implementing innovative practices without these being documented in the scientific literature.

Reliance on grey literature posed challenges due to its limited distribution and lack of standardisation, making it difficult to assess the quality and comparability of these sources.

In addition, some partners pointed to difficulties in accessing certain peer-reviewed journals due to high licensing costs, which could result in studies being lost.

The review also highlighted the conceptual ambiguity around social innovations in security. Many initiatives that may fall under the principles of social innovation may not be explicitly labelled or defined as such, which may complicate their identification and inclusion.

Finally, while the scoping review successfully mapped the existing literature, it mainly captured studies that met pre-defined inclusion criteria. This approach may have excluded exploratory or interdisciplinary works that could provide valuable insights but do not directly align with the specific terms and frameworks used in the search.

Short-medium term recommendations & CO-SECUR actions in next stages

Based on the results of the review, a series of short- and medium-term recommendations will be presented below, which are related to the following phases of the CO-SECUR project.

It would be beneficial to develop case studies of successful participatory initiatives to identify replicable elements and best practices that can be adapted by other nations with lower levels of citizen participation. This recommendation, which emerged from the literature review, has been addressed in the selection of case studies (CO-SECUR Phase 2), where the consortium has selected cases of SIS for in-depth analysis. By focusing on successful participatory initiatives, the project can identify best practices that can be adapted by other nations, improving public participation in governance and decision-making processes.

It is recommended that a more in-depth analysis of the social impact of technologies such as AI, IoT and surveillance systems be incorporated, and that guidelines be proposed to align technological innovations with the rights and needs of citizens. This analysis should focus on understanding the ethical, legal and social implications of these technologies. In this way, policy makers and technologists can ensure that innovations do not violate privacy or civil liberties and, instead, contribute positively to the well-being of society.

In the immediate future, an impact assessment of participatory security approaches could be carried out. This would involve evaluating how participatory interventions, such as co-creation platforms and community-driven initiatives, affect public safety and trust in security systems. Initial studies could use focus groups and surveys to gather the views of citizens and stakeholders involved in these initiatives. In addition, short-term research could explore the influence of different communication strategies (e.g., transparent versus opaque messages) on public trust in security policies, providing rapid information that can serve as a basis for more extensive studies. All of the above will be addressed in the next phases of CO-SECUR through interviews and focus groups with identified key stakeholders (CO-SECUR Phase 2) that will then serve as a basis for the development of the SDP (societal development plan).

The need to propose initiatives that provide technical and financial support to foster participatory frameworks in countries with low citizen participation (e.g. capacity development programmes) has also been identified. This is relevant to the capacity building and education aspects of the project (Phase 3), where the project will prepare materials to standardise the data collection process and provide support to local communities. By offering technical and financial support, the project can empower citizens to actively participate in social and political processes.

Expanding participatory initiatives could increase citizens' trust in national security and public participation. This recommendation is related to the evaluative research (Phase 3), in which the project will analyse how participatory initiatives contribute to citizens' perception of security. By expanding these initiatives, the project can foster trust and collaboration between citizens and authorities, leading to more transparent and accountable governance.

Security innovations and public safety strategies should adopt an intersectional approach that considers the diverse experiences of different social groups, particularly with regard to gender and racial or ethnic origin. To improve security and trust in public spaces, decision-makers must prioritise gender-sensitive urban planning, ensuring that the perspectives of women and other vulnerable groups are incorporated into the design of infrastructure, street lighting and transport safety measures. Furthermore, addressing the concerns of racial and ethnic minorities requires a shift towards inclusive, community-oriented policing. Strategies such as community advisory boards, participatory safety initiatives, and anti-discrimination training for police forces can help mitigate racial profiling and ensure that public safety efforts benefit all citizens equitably. Future CO-SECUR awareness activities, policy recommendations and capacity building activities (Phase 3) will adopt this gender-sensitive and racial and ethnic inclusive approach.

Long term implications and future research lines

Finally, based on the results of the literature review on social innovation in security for mass events and public spaces in Europe, several lines of future research are suggested that cannot be addressed in CO-SECUR but will be taken into account for future research.

In the coming years, expanding research on the public perception of security could provide a deeper insight into how demographic, cultural and psychological factors influence trust or scepticism towards security measures. Research into variables such as age, education and past experiences of victimisation would help refine security policies to align them with the public's concerns. In addition, studies could begin to explore the ethical and security implications of emerging technologies, such as AI, IoT and surveillance tools, by developing legal and ethical guidelines for their implementation. Initial frameworks for public oversight mechanisms, such as citizens' committees to review surveillance practices, could also be established.

In the long term, comprehensive longitudinal studies could be carried out to measure changes in crime rates, public satisfaction and levels of trust before and after the

implementation of participatory security initiatives, as well as the effects on the sense of self-efficacy and on social cohesion. These studies would provide robust empirical evidence on the long-term effectiveness of social innovations in security. In addition, broader cultural shifts in public participation could be promoted through sustained education and awareness-raising campaigns. This would involve training security personnel and policy makers to adopt more inclusive and communicative approaches, while fostering a social culture that values citizen participation in security governance.

Emotional and psychological variables, such as perception and trust, must be evaluated, for example, by advocating longitudinal studies to monitor changes in public trust over time and to assess the impact of participatory measures on trust levels. Furthermore, most psychological variables are not stable over time, so in order to respond to them effectively, periodic evaluations of the status quo should be carried out to adapt strategies to the reality of the variables.

At this concern, it is important to integrate the gender-sensitive and racial and ethnic inclusive perspective within the mentioned potential research lines.

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9. Annexes

ANNEX I

Peer-reviewed studies data collection form (first round)

ID reviewer (name)	
ID publication (number assigned)	
Title of the paper	
Year of publication (The study must have been published within the last 12 years)	
Country of study publication	
Access (e.g. www-site)	
Abstract available?	
Is it a peer reviewed paper?	
Objective of the paper (copy the aim of the study as stated in the paper)	
Is the paper responding to the review objective? Identify studies focusing on social innovations in security for public spaces and mass events that have been designed/developed through bottom-up approaches, public participation or focused public engagement.	
Do you think this paper is candidate to be read deeply?	

If not, specify the reason for exclusion	
Notes or suggestions	

Peer-reviewed studies data collection form (second round)

ID reviewer (name)	
ID publication (number assigned)	
Does the paper show any solution/technology or initiative/practice/activity/project/policy to promote security in crowded spaces and mass events?	Yes/No
If yes, please describe it	Open question
Does the paper show any security solution/technology or security initiative/practice/activity/project/policy to foster citizen security behaviour in crowded spaces and mass events?	Yes/No
If yes, please describe it	Open question
Does the paper show any security solution/technology or security initiative/practice/activity/project/policy to foster citizen security perception in crowded spaces and mass events?	Yes/No
If yes, please describe it	Open question
Does the paper analyse or discuss about security behaviour of people in general? For instance, psychological and/or social variables affecting.	Yes/No
If so, what does it say about it?	Open question
Does the paper analyse or discuss about security perception of people in general? For instance, psychological and/or social variables affecting.	Yes/No

If so, what does it say about it?	Open question
Does the paper describe any security technology/solution or initiative/practice/activity/project/policy implemented?	Yes/No
If yes, please describe it	
If yes, could this paper be also part of the mapping of case studies?	Yes/No
Does the paper show any security solution/initiative/activity/project/policy co-created through participatory processes? (i.e. bottom-up strategy that responds to citizens' needs)	Yes/No/Not specified
If yes, please explain it	Open question
From the text, could you identify any characteristics and key elements of socially innovative security solutions to effectively promote security perception and behaviour in society?	Yes/No
If yes, please specify those characteristics and key elements	Open question
Additional comments	

Grey literature data collection form (first round)

ID reviewer (name)	
ID publication (number assigned)	
Title of the document	
Year of publication (The document must have been published within the last 12 years)	
Country of publication	
Access (e.g. www-site)	
Document available?	
What type of document is it? (policy papers, standards, guidelines, reports, working papers, conference papers, glossaries, etc.)	
Objective of the document (copy the aim or description as stated)	
Is the document responding to the review objective? Identify studies focusing on social innovations in security for public spaces and massive events that have been designed/developed through bottom-up approaches, public participation or focused public engagement.	
Do you think this document is candidate to be read deeply?	
Notes or suggestions	

Grey literature data collection form (second round)

ID reviewer (name)	
ID publication (number assigned)	
Does the document show any solution/technology or initiative/practice/activity/project/policy to promote security in crowded spaces and mass events?	Yes/No
If yes, please describe it	Open question
Does the document show any security solution/technology or security initiative/practice/activity/project/policy to foster citizen security behaviour in crowded spaces and mass events?	Yes/No
If yes, please describe it	Open question
Does the document show any security solution/technology or security initiative/practice/activity/project/policy to foster citizen security perception in crowded spaces and mass events?	Yes/No
If yes, please describe it	Open question
Does the document analyse or discuss about security behaviour of people in general? For instance, psychological and/or social variables affecting.	Yes/No
If so, what does it say about it?	Open question
Does the document analyse or discuss about security perception of people in general? For instance, psychological and/or social variables affecting.	Yes/No
If so, what does it say about it?	Open question
Does the document describe any security technology/solution or initiative/practice/activity/project/policy implemented?	Yes/No

If yes, please describe it	
If yes, could this document be also part of the mapping of case studies?	Yes/No
Does the document show any security solution/initiative/activity/project/policy co-created through participatory processes? (i.e. bottom-up strategy that responds to citizens' needs)	Yes/No/Not specified
If yes, please explain it	Open question
From the text, could you identify any characteristics and key elements of socially innovative security solutions to effectively promote security perception and behaviour in society?	Yes/No
If yes, please specify those characteristics and key elements	Open question
Additional comments	

Summary report template

The following template has been developed to gather in summarised form the information collected by each partner country in the national literature review. In particular, the template is thought to be completed by each partner country after completing the second round of the literature review.

Question	HOW to answer	YOUR answer
In which databases did you search for peer-reviewed studies ? And how many studies did you find in each of these databases in the first-round review?	Please, indicate the name of the databases and the number of studies found in each. For instance, PsycInfo (N=13), Scopus (N=20), Web of Science (N=18). Please, also indicate if you used a national database different than the pointed in the guidelines.	
Would you say that in your national context there is sufficient number of peer-reviewed studies focusing on social innovations in security for public spaces and mass events that have been designed/developed through bottom-up approaches, public participation, or focused public engagement?	Yes/No. Please, justify your answer	
Would you say that in your national context there is sufficient number of documents/projects/initiatives/policies (grey literature) focused on social innovations in security for public spaces and mass events that have been designed/developed through bottom-up approaches, public participation, or focused public engagement?	Yes/No. Please, justify your answer	
Did you find in your national context any solution/technology or initiative/practice/activity/project/policy to promote security in crowded spaces and mass events?	Yes/No. Please, name it/them briefly.	

Did you find in your national context any solution/technology or initiative/practice/activity/project/policy that fosters citizen security behaviour in crowded spaces and mass events?	Yes/No. Please, name it/them briefly.	
Did you find in your national context any solution/technology or initiative/practice/activity/project/policy that fosters citizen security perception in crowded spaces and mass events?	Yes/No. Please, name it/them briefly.	
Would you say that in your national context there are enough studies and/or documents/projects focused on security behaviour of people in general?	Yes/No. Please, justify your answer.	
Would you say that in your national context there are enough studies and/or documents/projects focused on security perception of people in general?	Yes/No. Please, justify your answer.	
Did you find in your national context any security solution/initiative/activity/project/policy co-created through participatory processes ?	Yes/No. Please, name it/them briefly.	
Have you been able to detect common characteristics or elements that socially innovative security solutions/initiatives/projects/policies should have in order to effectively promote security perception and behaviour in society?	Yes/No. Please, justify your answer and if you have detected such common elements, please describe them. The common elements detected may be from the solution itself or from the solution development process, or simply general security requirements or guidelines.	
Would you say that in your national context the security solutions for public spaces have been developed involving the quintuple helix actors (in particular, citizens)?	Yes/No. Please, justify your answer.	

What would be the main findings and conclusions about social innovations in security for public spaces (mass events and crowded places) in your context?	Please, try to summary your findings	
What would be the main findings and conclusions about the findings in security perception in your national context?	Please, try to summary your findings	
What would be the main findings and conclusions about the evidence in security behaviour in your national context?	Please, try to summary your findings	
Other comments (such as: reason for poor quality, number of literature, difficulties associated with literature searching)	Please, feel free to adding any extra relevant information not mentioned before	

ANNEX II

Peer-review studies analysed (second round)

Country/Region	Year	Title	Link
Belgium	2024	Rating places and crime prevention: Exploring user-generated ratings to assess place management	https://www.scopus.com/record/display.uri?eid=2-s2.0-85185560147&origin=resultslist&sort=plf-f&src=s&sid=df0520f99a6b5625c8ade74e1384e895&sot=b&sdt=b&cluster=scoaffilctry%2C%22Belgium%22%2Ct&s=%28ALL%28social+AND+innovation%29+AND+ALL%28security%29+AND+ALL%28public+AND+spaces%29+OR+ALL%28mobility%29+OR+ALL%28security+perception%29+OR+ALL%28security+technology%29%29&sl=65&sessionSearchId=df0520f99a6b5625c8ade74e1384e895&relpos=11
	2023	A roadmap for the future of crowd safety research and practice: Introducing the Swiss Cheese Model of Crowd Safety and the imperative of a Vision Zero target	https://www.scopus.com/record/display.uri?eid=2-s2.0-85169037186&origin=resultslist&sort=plf-f&src=s&sid=df0520f99a6b5625c8ade74e1384e895&sot=b&sdt=b&cluster=scoaffilctry%2C%22Belgium%22%2Ct&s=%28ALL%28social+AND+innovation%29+AND+ALL%28security%29+AND+ALL%28public+AND+spaces%29+OR+ALL%28mobility%29+OR+ALL%28security+perception%29+OR+ALL%28security+technology%29%29&sl=65&sessionSearchId=df0520f99a6b5625c8ade74e1384e895&relpos=102
Europe	2013	Addressing social resistance in emerging security technologies	https://www.frontiersin.org/journals/human-neuroscience/articles/10.3389/fnhum.2013.00483/full

2014	Aging, place, and technology: Toward improving access and wellness in older populations	https://journals.sagepub.com/doi/full/10.1177/0898264314543470
2019	Communicating with the public about marauding terrorist firearms attacks: Results from a survey experiment on factors influencing intention to “run hide tell ” in the United Kingdom and Denmark	https://onlinelibrary.wiley.com/doi/full/10.1111/risa.13301
2022	Development of living labs to support gendered energy technology innovation in poor urban environments	https://www.sciencedirect.com/science/article/pii/S0160791X21003250
2019	Employee safety perception following workplace terrorism: A longitudinal study	https://www.tandfonline.com/doi/full/10.1080/20008198.2018.1478584
2013	User requirements elicitation in security and counter-terrorism: A human factors approach	https://link.springer.com/article/10.1007/s11896-013-9129-7
2021	Do you feel safe in the urban space? From perceptions to associated variables	https://journals.copmadrid.org/apj/art/apj2021a12
2017	The experiences and needs of individuals with disabilities exposed to chronic political violence	https://www.tandfonline.com/doi/full/10.3109/09638288.2016.1138557
2017	Women’s avoidance behaviours in public transport in the Ile-de-France region	https://link.springer.com/article/10.1057/s41300-017-0023-6
2016	Fear of crime on the rail networks: Perceptions of the UK public and British Transport Police	https://link.springer.com/article/10.1057/cpcs.2016.2

	2024	Perceptions and preferences of experienced security in mass urban events – What's technology got to do with it?	https://www.sciencedirect.com/science/article/pii/S0264275123004389
	2020	The importance of safety and security in urban space	https://www.researchgate.net/publication/366116311_The_importance_of_safety_and_security_in_urban_space
Finland	-	-	-
Germany	-	-	-
Greece	2013	Green Mobility in Cities: Policies for Sustainable Mobility in Urban Centers: A European Study (Chapter 4: Modern Approaches to Mobility and Infrastructure Policy)	https://bakogiannis.eu/images/publications/4.2/4.2.4.pdf
	2021	Guidelines for the Development and Implementation of a Sustainable Urban Mobility Plan	https://www.yme.gr/images/articleimages/anaptixi_metaforon/sxedia_viosimis_astikis_kinitikotitas/2021_07_05_hqfinalgreekversion2ndsumpguidelines.pdf
Lithuania	2017	Subjective Perception of Security Threats in Lithuania: Do People Feel Safe?	https://www.lmaleidykla.lt/ojs/index.php/filosofija-sociologija/article/view/5505
	2017	The perception of threats to national welfare: The impact of social optimism, self-confidence, and of social and institutional trust	https://www.zurnalai.vu.lt/politologija/article/view/10669/8749
	2016	Urban events and the rhetoric of a riot threat Vilnius after 2009	https://www.ceeol.com/search/article-detail?id=458846

	2012	The influence of the spatial structure of Kaunas city on safety in public spaces and green recreational areas	https://journals.vilniustech.lt/index.php/JAU/article/view/4788/4104
Poland	2015	Security of mass events for example Czestochowa racing	https://www.infona.pl/resource/bwmeta1.element.baztech-c7aa423e-83e6-4039-a75c-db69ba892fb0/tab/summary
	2012	Role of information platform for transport management during special events	https://yadda.icm.edu.pl/baztech/element/bwmeta1.element.baztech-046fe7ca-8c13-4626-9bb9-72e3e8569cc7
	2015	Mass events. Organisation, safety, good practice	https://open.icm.edu.pl/items/dfafbc9b-274f-4ac9-b909-38405f3453c6
	2014	City logistics good practices implementation from the organization of mass sporting events	https://www.ceeol.com/search/article-detail?id=246631
	2018	Terrorist threats to mass events organised in Poland	https://yadda.icm.edu.pl/yadda/element/bwmeta1.element.desklight-6e6111aa-4bef-4c77-8fe8-dcd20da3bab7
	2023	Security of mass sporting events with an international dimension	https://www.researchgate.net/publication/372539710_SECURITY_OF_MASS_SPORTING_EVENTS_WITH_AN_INTERNATIONAL_DIMENSION
	2021	Analysis of security activities at mass events in the context of epidemic threats - a study on the example of the Rzeszowskie Juwenaliów	https://depot.ceon.pl/handle/123456789/20309
	2012	Psychological Aspects of Securing Mass Events by Public Safety Institutions on the Example of EURO 2012	https://www.researchgate.net/profile/Tomasz-Waldzinski/publication/335168547_Physical_Fitness_of_11-14_Year_Old_Tennis_Players/links/5d540714a6fdcc85f89095f3/Physical-Fitness-of-11-14-Year-Old-Tennis-Players.pdf#page=82

	2015	Innovative Methods of Communication as Regards Public Security	https://yadda.icm.edu.pl/yadda/element/bwmeta1.element.ojs-doi-10_34862_rbm_2015_2_16
	2022	Safety of participants of a mass event on the example of a selected festival	https://www.infona.pl/resource/bwmeta1.element.baztech-5759b461-536f-4ec7-8080-a15cc3946e42
	2020	State support for innovation actions in public security management	https://www.infona.pl/resource/bwmeta1.element.mhp-962a58c7-a642-4b25-8d3b-6c7ca67f36ff
	2016	Chosen aspects of Football Fans Safety During the Premier League Games – Research Results	https://www.infona.pl/resource/bwmeta1.element.baztech-d5871b65-b805-40d7-bd08-clf39c0fde2f
	2016	Mass events safety „Woodstock Festival” practical aspects of protection	https://www.infona.pl/resource/bwmeta1.element.desklight-c977648a-12ff-4832-bd74-f12b87f94d6a
	2019	Security risk management for mass events	https://www.infona.pl/resource/bwmeta1.element.baztech-fd3d87d4-27f1-4053-b286-ccb9d1d4dd6e
	2015	Logistics Projects Management – Mass, Sporting Events in Crisis Situations	https://yadda.icm.edu.pl/yadda/element/bwmeta1.element.ekon-element-000171378141
Portugal	2019	Crime prevention through environmental design (CPTED) in Portugal: Literature review and knowledge networks	https://repositorio-aberto.up.pt/handle/10216/123611
	2022	The organization of public events and society's disneyization: case study in Oporto downtown	http://www.apostadigital.com/revistav3/hemeroteca/fmrcruz3.pdf
	2022	Is Campus a Place of (In) Security and Crime? Perceptions and Predictors among Higher Education Students	https://www.mdpi.com/2254-9625/12/2/15

	2016	Towards a Critical Understanding of Urban Security within the Institutional Practice of Urban Planning: The case of the Lisbon Metropolitan area	https://repositorio.ul.pt/bitstream/10451/24601/3/ICS_STulumello_Toward_JPER_accepted.pdf
	2017	Women, technology, and spatiality of fear: the challenge of participatory mapping and perceptions of safety in urban spaces	https://www.webofscience.com/wos/woscc/full-record/WOS:000399123500012
	2024	Physical space characteristics and official statistics of crime in the historic centre of Porto, Portugal: the crucial role played by crime prevention through environmental design.	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85185910941&doi=10.1057%2fs41300-024-00199-3&partnerID=40&md5=9f972ef0d689588ead399e04349d22be
Romania	2012	Urban (in) Security and Assessment of Extreme Poverty: Residents' Perception Referring to Homelessness in Bucharest	https://www.sciencedirect.com/science/article/pii/S1878029612004926
	2016	Urban management foundation in risk reduction	https://www.witpress.com/elibrary/wit-transactions-on-ecology-and-the-environment/204/35642
	2015	Study regarding the Braşov county citizens' security and insecurity perception	https://revista.unap.ro/index.php/revista/article/view/166
	2021	Between Liberty and Control: Citizens' Attitudes Towards Romanian State Surveillance	https://revistasociologieromaneasca.ro/sr/article/view/1722/1653
	2021	Social innovation and rural development. Two longitudinal case studies from the north-east Romania	https://www.researchgate.net/publication/356377753_INOVATIA_SOCIALA_SI_DEZVOLTAREA_RURALA_DOUA_STUDII_DE_CAZ_LONGITUDINALE_DIN_NORD-ESTUL_ROMANIEI
Spain	-	-	-

ANNEX III

Grey Literature documents analysed (second round)

Country/ Region	Year	Title	Link
Belgium	2021	Belgian Report on Science Technology and Innovation	https://www.belspo.be/belspo/organisation/publ/pub_ostc/BRISTI/FWB_rapport_2021_en.pdf
	2021	Public Sector Innovation through Collaboration (PSI-CO) project	extension://ngphehpfehdmjellohmlojklilekadg/pages/pdf/web/viewer.html?file=https%3A%2F%2Fwww.belspo.be%2Fbelspo%2Fbrain-be%2Fprojects%2FFinalReports%2FPSI-CO_WPI.pdf
	2020	Good Move: Regional Mobility Plan for the Brussels-Capital Region	https://mobilite-mobiliteit.brussels/en/good-move
Europe	2023	How social innovation in cities makes our lives better	https://www.wired.com/sponsored/story/how-social-innovation-in-cities-makes-our-lives-better/
	2024	Security Trends for High-profile, Large-scale Events	https://pinkerton.com/our-insights/blog/security-trends-for-high-profile-large-scale-events
	2017	LETSCROWD EU project: Law Enforcement agencies human factor methods and Toolkit for the Security and protection of CROWDs in mass gatherings	https://letscrowd.eu/deliverables/

2023	Embedding Security Behaviours: using the 5Es: A framework for improving security behaviour within organisations	https://www.npsa.gov.uk/system/files/documents/98/dc/Embedding-Security-Behaviours-Using-5Es.pdf
2023	APPRAISE project: Facilitating public and private security operators to mitigate terrorism scenarios against soft targets	https://appraise-h2020.eu/
	The importance of social cohesion for urban crime prevention	
2022	Safe and inclusive public spaces: European cities share their experience	https://issuu.com/efus/docs/publication_pactesur_en_v5
2023	The BeSecure-FeelSecure (BSFS) project: Enhancing community trust & well-being in Piraeus	https://www.bsfs-piraeus.eu/
2024	Gender inclusivity University of York (IcARUS project: innovative approaches to urban security)	https://www.icarus-innovation.eu/wp-content/uploads/2024/09/Factsheet_York-Gender-IcARUS-Project_FC20240828.pdf
2019	Urban agenda for the EU security in public spaces	https://urbanagenda.urban-initiative.eu/sites/default/files/migration_files/orientation_paper_security_in_public_spaces_public.pdf
2022	Interpol guide to stadium safety and security licensing and certification	https://www.interpol.int/es/content/download/10984/file/Projects_heet%20STADIA_2018-01_ES_LR.pdf
2022	Interpol guidance form managing major event public health risk	https://www.interpol.int/content/download/17593/file/INTERPOL_Project_Stadia_public_health.pdf

	2022	UrbSecurity Action Planning Networks	https://urbact.eu/sites/default/files/2022-12/urbsecurity_iap_report.pdf
Germany	2023	Innovation in the space between. How innovations succeed! Notes on the MARGE research project 2017 to 2019.	https://link.springer.com/chapter/10.1007/978-3-658-37386-3_12
	2021	Research for civil security - Innovative security checkpoint	https://www.tib.eu/de/suchen?tx_tibsearch_search%5Baction%5D=download&tx_tibsearch_search%5Bcontroller%5D=Download&tx_tibsearch_search%5Bdocid%5D=TIBKAT%3A1849803358&cHash=6a5651914c4b019b63c64ac766c2ee9a#download-mark
	2021	Research project S2UCRE	https://www.tib.eu/de/suchen?tx_tibsearch_search%5Baction%5D=download&tx_tibsearch_search%5Bcontroller%5D=Download&tx_tibsearch_search%5Bdocid%5D=TIBKAT%3A1839639563&cHash=9edaa10fba4ab49387b8337c5395b745#download-mark
	2015	BaSiGo Guide	https://basigo.vfsg.org/index.php?title=Hauptseite
	2020	European recommendations for action for the protection of public spaces against terrorist attacks	https://www.berlin.de/polizei/aufgaben/praevention/safeci/
	2020	Dealing with drugs in public - challenges for safety in cities (DRUSEC)	https://www.tib.eu/de/suchen?tx_tibsearch_search%5Baction%5D=download&tx_tibsearch_search%5Bcontroller%5D=Download&tx_tibsearch_search%5Bdocid%5D=TIBKAT%3A1830455699&cHash=d00de7e12bb8aa2a95bf69287275b15c#download-mark
	2008	Urban safety and participation. Importance and function of civic participation in municipal crime prevention	https://link.springer.com/book/10.1007/978-3-531-91022-2

	2021	Life, transportation and connectivity in the smart city. Of social innovations and new risks in our networked cities.	https://www.gabal-verlag.de/buch/leben-transport-und-vernetzung-in-der-smart-city/9783967400915
	2019	WISIMA – TP: Innovative technical solution to evaluate the impact of security solutions in public transport.	https://www.tib.eu/de/suchen?tx_tibsearch_search%5Baction%5D=download&tx_tibsearch_search%5Bcontroller%5D=Download&tx_tibsearch_search%5Bdocid%5D=TIBKAT%3A170047779X&cHash=38521a95da673dc7e456152f79afe9ef#download-mark
Greece	2014	The priorities of the National Strategic Framework for Research and Innovation (ESPEK)	http://www.opengov.gr/ypepth/?p=2031
	2014	Article 53 – Transportations and public transport	http://www.opengov.gr/minenv/?p=5882
	2022	Sustainable Urban Mobility Plan of the Municipality of Marousi	https://maroussi.gr/wp-content/uploads/2022/03/Stadio_Svak_4.pdf
	2015	Urban Mobility Study for the Municipality of Larissa	https://www.larissa.gov.gr/images/dataold/pdf/Parousiasi_KIN.pdf
	2016	Guidelines for Sustainable Urban Mobility Plans	https://citiesforcycling.gr/%CE%BF%CE%B4%CE%B7%CE%B3%CE%AF%CE%B5%CF%82-%CE%B3%CE%B9%CE%B1-%CF%84%CE%B1-%CF%83%CF%87%CE%AD%CE%B4%CE%B9%CE%B1-%CE%B2%CE%B9%CF%8E%CF%83%CE%B9%CE%BC%CE%B7%CF%82-%CE%B1%CF%83%CF%84%CE%B9%CE%BA%CE%AE/
	2022	Prevention of hooliganism and fan violence: A game everyone should play together	https://www.eliamep.gr/wp-content/uploads/2022/02/Policy-brief-159-Karatrantos-EL-final.pdf
Finland	2016	Secure City: Perspectives for the planning and implementation of building	SY_4_2016.pdf

	2021	Safe/ Secure 2021: Citizen Safety/ Security	https://issuu.com/spek_ry/docs/spek_tutkii_25?fr=sMmZmMTQyMTY4Mjl
	2023	Sentiment analysis: research results	https://intermin.fi/documents/1410869/4024872/Sentimentti-tiivistelma-tutkimustuloksista-lokakuu2023.pdf/
Lithuania	2013	Safety in public spaces as a result of the application of democratic urban planning principles (example of Vilnius city)	https://www.researchgate.net/publication/303960787_Saugumas_viesosiose_erdvese_kaip_demokratiniu_miestu_planavimo_principu_taikymo_rezultatas_Vilniaus_miesto_pavyzdziu
	2012	Community participation in crime prevention	https://talpykla.elaba.lt/elaba-fedora/objects/elaba:2008328/datastreams/MAIN/content
Poland	2016	Innovation is development. Operational management in the theory and practice of business, public and non-governmental organisations.	http://www.pracenaukowe.wwszip.pl/prace/prace-naukowe-39.pdf#page=135
	2017	Human security in the city as a research issue	https://www.ceeol.com/search/article-detail?id=561326
	2017	Air Show: the logistic service of the mass event	https://yadda.icm.edu.pl/baztech/element/bwmeta1.element/baztech-d3076002-2fae-4c3d-ad72-85d5969abfac
	2023	Logistics support system of music festival on the example of Open'er Festival	https://repozytorium.bg.ug.edu.pl/info/article/UOG4aa6f30107614397877beldbd317da52?ps=20&lang=en&title=&pn=1&cid=216861
	2020	Security of mass events. Commentary: Edition: 2	https://books.google.pl/books?hl=pl&lr=&id=7y9QEAAAQBAJ&oi=fnd&pg=PA5&dq=bezpiecze%C5%84stwo+na+impresjach+masowych&ots=pEWrtT6PRz&sig=900UNxsJAJRXPgQgkEqOShubgZU&redirect_esc=y#v=onepage&q=bezpiecze%C5%84stwo%20na%20impreszach%20masowych&f=false

	2023	Safety in public spaces	https://builderscience.pl/resources/html/article/details?id=613439&language=pl
Portugal	2023	Regulation 003/2023, of 05/10/2023 - Preparation and Response at Mass Events	https://www.dgs.pt/ficheiros-de-upload-2013/preparacao-e-resposta-em-eventos-de-massas-pdf.aspx
	2023	Results of the survey on safety in public and private spaces	https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaque_s&DESTAQUESdest_boui=625453725&DESTAQUESmodo=2
	2022	Mass events	https://www.anmsp.pt/post/eventos-de-massas
	2024	Video surveillance and the ghettoization of public space	https://www.dn.pt/opiniao/videovigilancia-e-a-guetizacao-do-espaco-publico-17270145.html/
	2019	Do you know how to act safely in public spaces?	https://visao.pt/atualidade/sociedade/2019-02-13-sabe-agir-em-seguranca-em-espacos-publicos/
	2022	Security by Design handbook, page 41, Case study: Foot patrol community policing to promote safer communities, Lisbon, Portugal.	https://counterterrorism.ec.europa.eu/book.php
	2020	“Sanus” project, 2020, guarantees security and control of access to public spaces in the pandemic context.	https://portugal2020.pt/projeto-sanus-garante-seguranca-e-controlo-nos-acessos-aos-espacos-publicos/
	2020	Emergencies in public space	https://www.cm-matosinhos.pt/servicos-municipais/protecao-civil/riscos/conselhos-basicos-de-seguranca/emergencias-em-espacos-publicos
2020	Security rules in public spaces	https://www.cm-odemira.pt/cmodemira/uploads/document/file/8947/Regras_de_Seguran_a_em_Espa_os_P_blicos.pdf	

	2020	Urban Security in proximity geography in Portugal	https://www.researchgate.net/publication/346791456_A_Seguranca_Urbana_na_Geografia_de_Proximidade_em_Portugal
	2022	Multidimensionality in Geospatial Urban Crime Prevention Modelling and Decision Support: The case of Porto, Portugal.	https://sigarra.up.pt/reitoria/en/pub_geral.pub_view?pi_publicacao_id=588225
Romania	2019	How to increase safety in cities by redesigning public spaces	https://roeu.org/2019/09/01/cum-sa-cresti-siguranta-in-orase-reamenajand-spatiile-publice/
	2023	National Public Order and Safety Strategy 2021-2027	https://legislatie.just.ro/Public/DetaliiDocument/276419
	2020	How abandoned spaces and buildings affect urban crime	https://roeu.org/2020/02/23/cum-afecteaza-spatiile-si-cladirile-abandonate-infracionalitatea-urbana/
Spain	2022	Guide to security measures during major sporting events promoting security and sustainable legacies	https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.un.org/counterterrorism/sites/www.un.org_counterterrorism/files/spanish_sports_security_mses_guide_web.pdf&ved=2ahUKewjtrKfMiseIAXUpVqQEHTjpEJsQFnoECCcQAQ&usg=AOvVawID79hpxnNYgpRWI9lgWp0
	2021	How technology is the answer to the challenges of event security	https://weezevent.com/es/blog/tecnologia-seguridad-eventos/
	2022	Global Programme for Innovation in Security	https://www.incibe.es/sites/default/files/paginas/programas/Programa%20Global%20de%20Innovaci%C3%B3n%20en%20Seguridad.pdf
	2021	Guide to action in the face of gender violence	https://www.igualdad.gob.es/wp-content/uploads/GuiaPuntoVioletaCastellano.pdf

	2020	Hospitalet de Llobregat conciliators' network	https://fepsu.es/wp-content/uploads/2023/07/PROYECTO_FEPSU_REDDECONCILIADOR_ES.pdf
	2022	Artemis: innovation to prevent gender-based violence	https://fepsu.es/artemis-innovacion-prevenir-violencia-machista/

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