SEVENTH FRAMEWORK PROGRAMME

SECURITY, Collaborative Project

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Best Practice Enhancers for Security in Urban Regions

BESECURE

D6.1: Case Study Registry

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EXECUTIVE SUMMARY

Objectives

This document presents deliverable 6.1 'the Case Study Registry': the first design of the structure and its applications. The case study registry provides the structure by which the data from the case study research will be categorised, enriched, and stored. Together with the results from the desk research (from WP1) and the data framework (from WP2), the case study registry will constitute the basis for the development of the comparative method underlying the BESECURE models and tools.

Description of the work

Based on the first results from the case study research, as well from desk research, a preliminary coding structure has been developed that will be used for the categorisation and storage of data from the case study research. The coding structure also provides support and guidance for the data collection in the case study areas, and it will contribute to the development of the comparative method.

Results and conclusions

The case study registry provides a systematic way for storing and coding the data coming from the case study research. In the simplest form, the coding structure contains three main categories: issues, approaches and context. For each of these main categories, a first elaboration of the coding structure is developed and presented in this document.
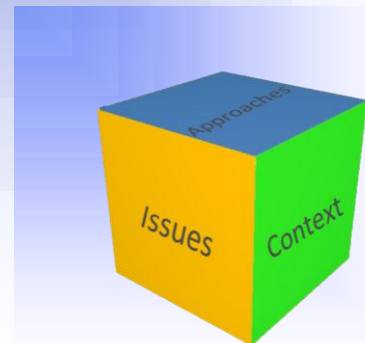
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1. Introduction

1.1. Purpose of BESECURE project

The project BESECURE (Best practice Enhancers SECurity in Urban REgions) will work towards a better understanding of urban security through examination of different European urban areas. By examining eight urban areas throughout Europe, BESECURE will build a comprehensive and pragmatic knowledge base that will support policy making on urban security challenges by sharing best practices that are in use throughout Europe, and by providing visualisation and assessment tools and guidelines that will help local policy makers to assess the impact of their practices, and improve their decision making.

1.2. Purpose of work package 6

Work package 6 (WP6) has two main roles within BESECURE. The first role is to develop a comparative method that – together with the data framework from WP2 – will constitute the underlying structure of how pieces of information in the BESECURE toolbox are stored. The second role of WP6 entails the coordination of the evaluation and integration of the different parts of the toolbox. With these two roles, WP6 functions as a coordination mechanism between various other (groups of) work packages (see figure 1.1 for a visualisation of the relations between WP6 and the other work packages of BESECURE).
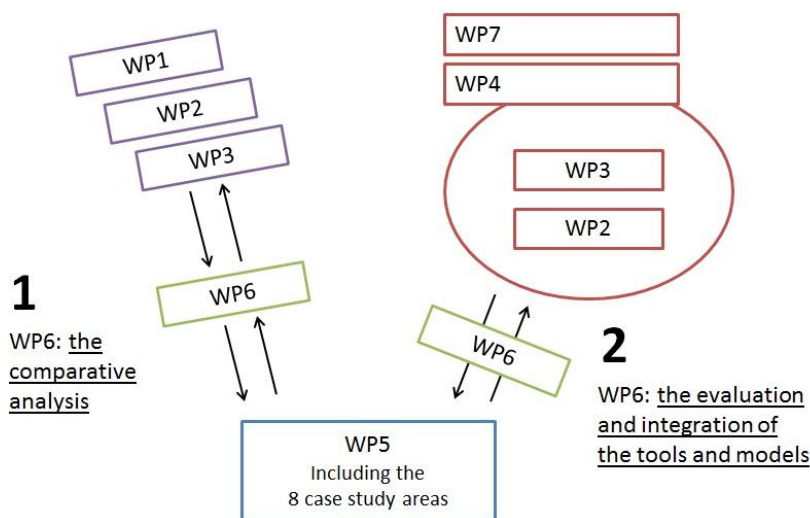
Figure 1.1 - Relations between WP6 and other work packages of BESECURE

WP6 has several tasks and deliverables that are connected to the two roles of the work package. This deliverable relates to the first role: the development of the comparative method, and more specifically to the creation of a structured case study registry for categorizing, enriching and storing the data from the case study areas.

The comparative analysis component of figure 1.1 visualises the links between WP6 and other work packages in relation to developing the comparative method. For this role WP6 is connected to WP1, WP2, WP3 and of course WP5. WP2 and WP6 are responsible for

creating data frameworks that support the categorising, enriching and storing of all the data coming in from the case study areas (WP5) and desk research (WP1). The data frameworks from WP2 and WP6 constitute the foundation for the data structure of the BESECURE toolbox and are complementary to each other. As the project progresses, these two frameworks will be implemented as the underlying structure for the BESECURE end product. The integration of the different frameworks will be supported by WP3 and the development of their process support model.

1.3. Purpose of D6.1

The purpose of Deliverable 6.1 'Case Study Registry' (hereafter D6.1) is to present the structure by which the data from the case study research will be categorised, enriched, and stored. Together with the results from the desk research (from WP1) and the data framework (from WP2), the case study registry will set the foundation for establishing comparisons, a core component for the underlying models and tools within BESECURE.

2. The case study registry

2.1. Introduction

In the most simple explanation of its structure, BESECURE bases its tools and models on the interrelations between three main categories of data: **issues** (security challenges that urban areas are faced with), **approaches** (the policies and practices that are developed to tackle these security challenges), and **context** (variables that provide information about the specific urban zones in which the issues and approaches emerge). This can be visualised as the three axes of a cube (see Figure 2.1). The cube stores within it all the pieces of information that constitute the knowledge base of BESECURE. The three main categories (issues, approaches and context) are the foundation of the framework by which pieces of information are coded within the BESECURE toolbox.
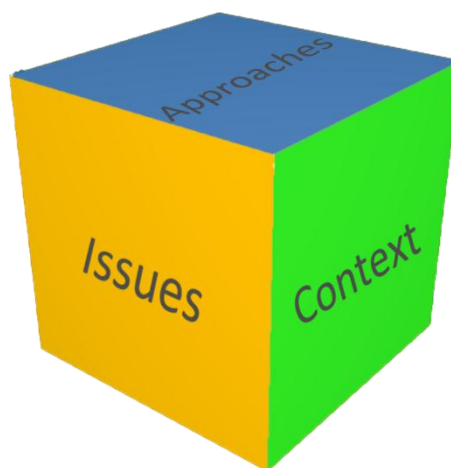

Figure 2.1 – The Cube

Within this framework a distinction can be made between two broad types of data. On the one hand, there is the data about approaches that address security issues ('practices'). This data comes mostly from the case study research and is to a large extent qualitative. The other data type concerns general information about urban areas (the context: 'urban data'). This data is both quantitative (statistical data about demographics, economic data etc.) and qualitative (e.g. culture and governance style). The case study registry (D6.1) captures the 'practices', whereas the 'urban data' will be stored in the WP2 data framework (D2.1). As such, these two frameworks constitute the foundation for the data structure of the BESECURE toolbox. The integration of the two frameworks will be supported by WP3, that will develop a process support model that is based on the data frameworks from WP2 and WP6.

The case study registry provides a systematic way for storing and coding the data coming in from the case study research. In turn, the structure of the registry offers a guideline for the focus of the data collection in the case study areas. Each of the main categories (i.e. axes of the cube) are operationalized along a number of dimensions that are relevant for the categorisation of pieces of information. These dimensions constitute the coding system by which each entry in the knowledge base will be categorised. In general, each entry coming

from the case study research is given a reference code relating to all three sides of the cube (i.e. each entry is about an approach or set of approaches that is related to one or more issues and that originates in a specific type of context). This reference code consists of the position of that specific entry on all the different dimensions in the registry. For the specific purpose of the case study registry, this means that it is a structure by which the pieces of information are organized and stored. In addition, this reference code is part of the development of the comparative method by which each piece of information is enriched with an analytical value, referring to the relative position vis-à-vis other entries in the registry (this could be a numerical value that consists of a specific number for the position of the entry in each of the three main categories in the coding structure). In Chapter 3 we will further discuss the relationship between the coding structure of the case study registry and the development of the comparative method.

2.2. Case study registry design

In the remainder of this chapter the first design of the case study registry is presented. It is important to keep in mind that the case study registry is a work in progress. This deliverable presents the idea and functions of the registry, along with the first basic elaboration of the dimensions constituting the coding structure. The more detailed coding structure will be further developed, adjusted and refined as the project progresses. The continuing development will be influenced by results coming from the case studies, insights from the desk research, as well as in coordination with the data framework that is developed in WP2. In this phase of the project, it is important to be pragmatic and keep the structure of the registry manageable.

2.2.1. Issues

In terms of the various issues (i.e. security challenges) that contemporary urban areas are faced with, several important questions need to be answered:

- *What is the issue (i.e. what is going on)?* This refers to the type of problem;
- *Where is the issue taking place?* This refers to the specific location and type of location where the problem is occurring;
- *Who is involved?* This refers to both the perpetrator(s) and the victim(s) of the issue.

These questions correspond with the dimensions that are part of the coding structure of the case study registry (see Appendix A for an overview of the coding structure of the issues, and Figure 2.2 for a detail of the coding structure). The 'what' dimension consists of a general typology of urban security issues that is based on the first results from the case study research as well as insights from desk research. The 'where' dimension contains a relation with the coding structure of the context, and besides that it contains other dimensions that may provide relevant information about the specific location of the issue. The 'who' dimension contains categories of the actors that are involved with the issue. For now this consists of perpetrators and victims, but this might possibly be expanded to include also a category for the specific (governmental) problem-owner, which will then also be a link to the coding structure of the approaches.
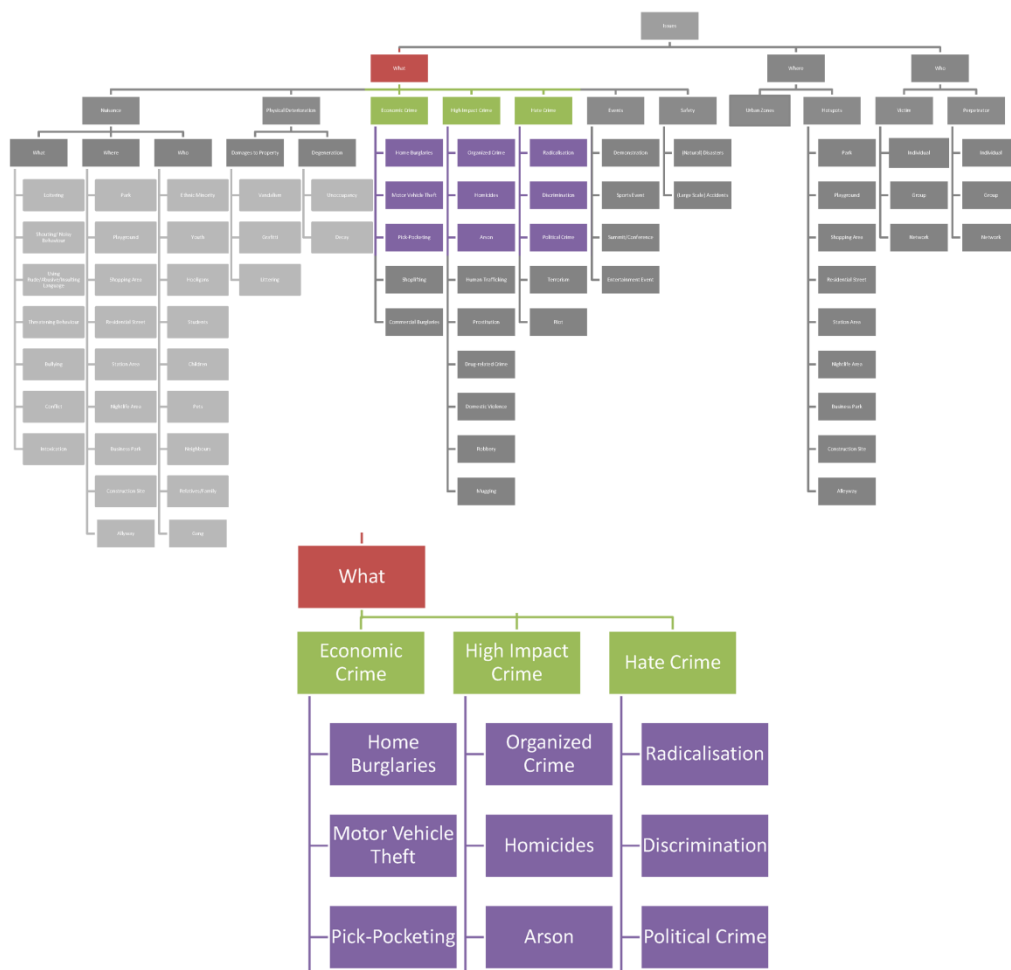
Figure 2.2 – Detail of the coding structure for ISSUES

At this moment, the dimensions chosen and the operationalization of these dimensions represent the broadest categories and generic typologies. Each of the levels of these dimension might be broken down further into a next level of categorisation, depending on the varieties of entries that will come in from the research. For instance, in the 'what' dimension, the generic type of issue that is called 'hate crime' is now broken down into five different categories of hate crime. It might be necessary to add other categories to these five or to break down the types of 'discrimination' according to the different categories of groups that are being discriminated (e.g. ethnic, religious, sexual orientation, disabled, …) or according to different categories of manifestations of the discrimination (e.g. verbal abuse, physical abuse, exclusion, …). This is an example of the continuing development mentioned above.

2.2.2. Approaches

When it comes to the approaches, there are very many dimensions that may be relevant for the analysis of practices. The BESECURE toolbox will offer support for decision makers about practices. As such, it is essential to gather those types of information that they find most relevant. During the stakeholder consultations and evaluation sessions, it will become increasingly clear what the requirements and needs of decision makers are with regard to information about practices. At this moment, we have selected only a few dimensions by which an approach can be classified. The selection is based on a preliminary review of

several practices found in literature as well as on discussions with the case study leads. The dimensions that we have selected correspond with the following questions:

- *When is the approach undertaken and when are results expected?* This refers to the timeframe of the approach;
- *What is the approach?* This refers to the specific type of approach;
- *Who is involved?* This refers to the stakeholders that are involved in the approach.

Appendix B offers a complete overview of the coding structure of the approaches (see Figure 2.3 for a detail of the coding structure). The 'when' dimension is divided into two categories. The first addresses the phase in which an approach is undertaken (e.g. is it a preventative approach or repressive?). The second 'when' category refers to the outcomes of the approach (e.g. are effects expected on the short term or long term?). The 'what' dimension contains categories that describe what the orientation of the approach is, as well as what the actual approach looks like (how it is performed). The orientation is – for now – divided into three categories, a problem orientation (linking to the issues), a people orientation, and an area orientation (linking to the context). The 'who' dimension refers to the actors who have initiated the approach, as well as to the actors who are involved in the implementation of the approach. It is imaginable that there will be a third category of actors, referring to those who are financing the approach.
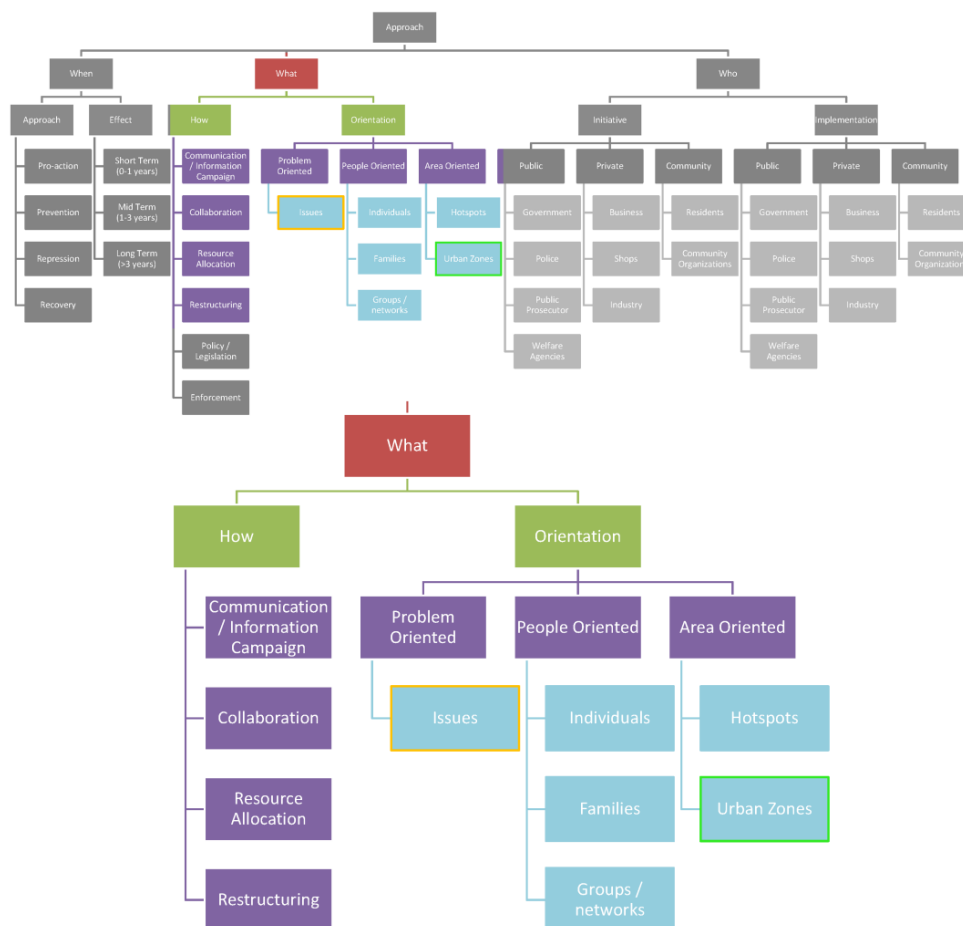

Figure 2.3 – Detail of the coding structure for APPROACHES

The current selection of dimensions in the approaches coding structure, more than for the issues, will probably be expanded and revised while more information about approaches is coming from the case study research and as we add best practices from the literature.

2.2.3.   Context

For the context, the case study registry will make use of the urban zone typology that is being developed in WP1 (in correspondence with the urban data framework from WP2). The typology will be based on a structure that is quite similar to the coding structures of the issues and approaches as described above. As explained in D1.1 (see Figure 2.3), the typology will combine the categorisation of primary functions of an area (e.g. residential, commercial, industry) with relevant variables belonging to four domains (economic, institutional, socio-cultural, and physical environment). As such, the urban zone typology will be a comprehensive and pragmatic structure that can be used to link the case study entries about a practice to the type of context from which it originates.
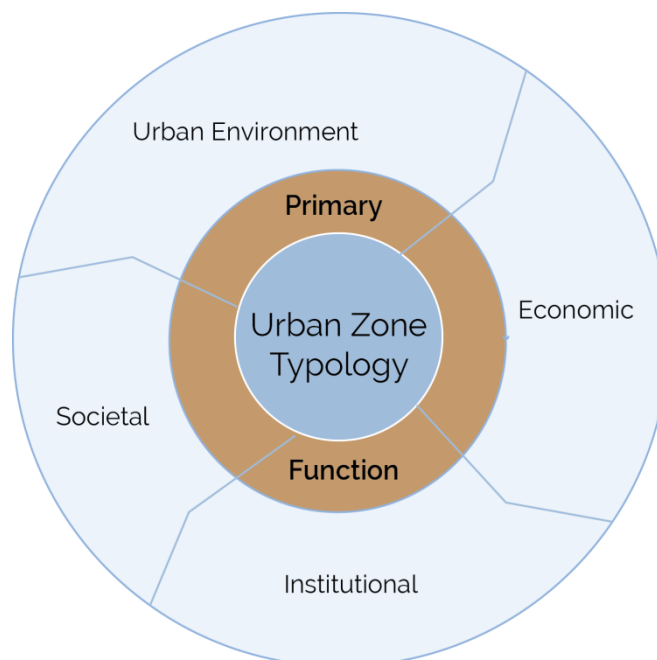

Figure 2.3 – Structure of the urban zone typology (from D1.1)

3. Applications of the Case Study Registry

This chapter will describe the ways in which the case study registry will be used (for data storage and case study guidance), how it relates to the development of the comparative method (D6.2), and how it can be used in the BESECURE toolbox.

3.1. Data storage

In its most basic form, the case study registry offers a system to store the information entries coming in from the case study research as well as from the desk research. It is important to have a unified system for storing and coding the data, to be able to search-and-retrieve the entries or perform further analyses on the relations between different entries. At this moment the registry offers the basic coding structure to categorise, enrich, and store all pieces of information. Each data entry will receive a reference code (analytical value) that positions the entry in the BESECURE data structure and that allows retrieving relatively similar (or different) entries on each of the dimensions or a combination of dimensions. When coding and storing a piece of data, it needs to be clear how the coding structure should be applied. For instance, for some of the dimensions a piece of data might be attributed to more than one category, whereas for others there can only be one choice that excludes the other categories. This kind of instructions about the use of the coding structure will be included in the on-going development and refinement of the registry and the comparative method.

3.2. Case study guidance

An important role of WP6 is to provide – together with the WP5 lead – support and guidance for the case study leads. From the perspective of WP6, this mainly entails providing guidance for the focus of the data collection in the different case study areas. This is an iterative process and the case study registry has an important function in this process. The operationalization of the dimensions and categories in the case study registry provides a common structure for the collection of data, since it tells the case study leads what (type of) information is needed about the issues, approaches and context. As the level of detail of the categorisation of the case study registry will increase, it will be essential to give direction to the case study leads that fits with that level of detail. Ideally, it would be possible for each piece of information from the case study areas to be positioned on all the categorisation levels of the case study registry.

The first iteration of the case study research was explorative. The aim was to get a first overview of the types of problems and approaches that are relevant in each case study area. These results have been used to develop the first design of the case study registry and to explore where the most interesting opportunities for comparison between the case study areas are. From this analysis, it becomes clear what the general focus should be for each case study area. The scope of the case study research is both wide and narrow at the same time. The aim is to have enough data about a good variety of issues, approaches and types of urban zones. At the same time, it is important that there is ample ground for comparison between different areas, in order to test the relations between different variables and indicators that are built into the structure of the BESECURE knowledge base. The guidance of the case study research will be done in close cooperation with the WP5 lead. The specific 'assignments' for each case study area will be included in their specific work plans. The work plans are updated at least after each 6-month period of the case study research.

3.3. Developing a Comparative method

The case study registry facilitates comparison between information from different case study areas. Qualitative and quantitative data on issues, approaches and context will be stored, using different categories and coding structures as discussed above. The next step in WP6 is to develop a "comparative method" (D6.2) that allows users of the BESECURE toolbox in a specific area to identify (relatively) comparable insights (issues, approaches and context variables) from other case study areas. In this paragraph we describe the envisaged features of such a method. It is important to keep in mind that the aim of BESECURE is not primarily to perform a comparative analysis of the eight case study areas, but the comparative method that will be developed will enable the users of the toolbox to perform comparisons of their own. To get to that point we do need to analyse the data coming into the case study registry in such a way that supports the validity and quality of the comparative structure of the toolbox. The coding structure of the case study registry, as explained in the previous chapter, is the first step towards the development of the comparative method. The reference code that each entry receives in the coding structure shows the 'comparability' with other entries. At this point, the structure is still basic and conceptual. The details of the coding structure and comparative method will be further developed as the project proceeds. Several important requirements for the development of a comparative method are described below. It will be important to keep these in mind when working with and elaborating the case study registry.

3.3.1.   Requirements of a comparative method

In order to be able to compare all kinds of entries that are stored in the BESECURE data frameworks, it is important to **deal with the question of nearness** of data entries. The comparative method will not only allow users to identify insights that are exactly equal, but more importantly also insights that are nearly equal. The underlying assumption is that the comparability of two entries depends on the number of features they share: characteristics specified in the case study registry. To put it simply: an entry labelled as 1.3.4 (the three numbers representing specified reference codes for issues, approaches and the urban zone typology) is more similar to an observation labelled as 1.3.5 than to an observation labelled as 2.2.2.

To be able to use the idea of nearness for the comparison of data entries, it is important to use suitable codes that allow the use of distances. The case study registry and the urban data framework from WP2 store qualitative and quantitative data, using nominal or categorical typologies for qualitative observations (e.g. types of issues and approaches) and ordinal or interval typologies[1] for quantitative observations (e.g. income level of an urban area, crime statistics, etc.). For the development of the comparative method it is important to **use ordinal and interval variables as much as possible**, because they allow us to think in terms of distances. Using the three digits example again: an entry labelled as 2.3.1 (the third number representing an ordinal variable with three categories: low, medium and high) is closer to 2.3.2 (medium) than to 2.3.3 (high).

Although the use of distances is an important requirement for a comparative method, it is also important to distinguish between the relevance of different categories and variables. Ideally the comparative method will **put weights to the variables**. While some variables are less relevant in the comparison, others are essential. A data entry with reference code 3.4.4

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[1] Ordinal variables specify different levels with a clear ordering, such as low - medium - high. Interval variables are similar to ordinal variables but also have defined spaces between the measures.

might look similar to one with the reference code 5.4.4, but if the first category is essential (a high weight), the difference between type 3 and type 5 could make the resemblance of the two other categories nearly irrelevant. Weights will initially be determined by insights from desk research (WP1) and case study research (WP5), but it is conceivable that this will later also be based on input provided by the users of the system. The comparative method could evolve from a static analysis of variables with weights based on desk research and case study research into a more dynamic, self-learning system in which the weights put to variables change as a result of the interaction with users. This interaction can be put into practice by evaluating suggestions for comparison. This is a topic that will be considered in the evaluation phase of the BESECURE project (the second role of WP6).

3.4. Use of the case study registry in the BESECURE toolbox

The case study registry is first and foremost part of the underlying structure of the BESECURE tools and models, and therefore a 'hidden' feature of the BESECURE toolbox. Nevertheless, we want to address the direct and indirect functions that the case study registry has for the end-users of the BESECURE toolbox. In the first place, the end-users will be able to search-and-retrieve relevant case files based on the attribution of codes to the pieces of data from the case study areas. By conducting a query, end-users will be able to search for specific information. The end-users can also use the knowledge base for an exploration of their own urban area by using the same coding structure.
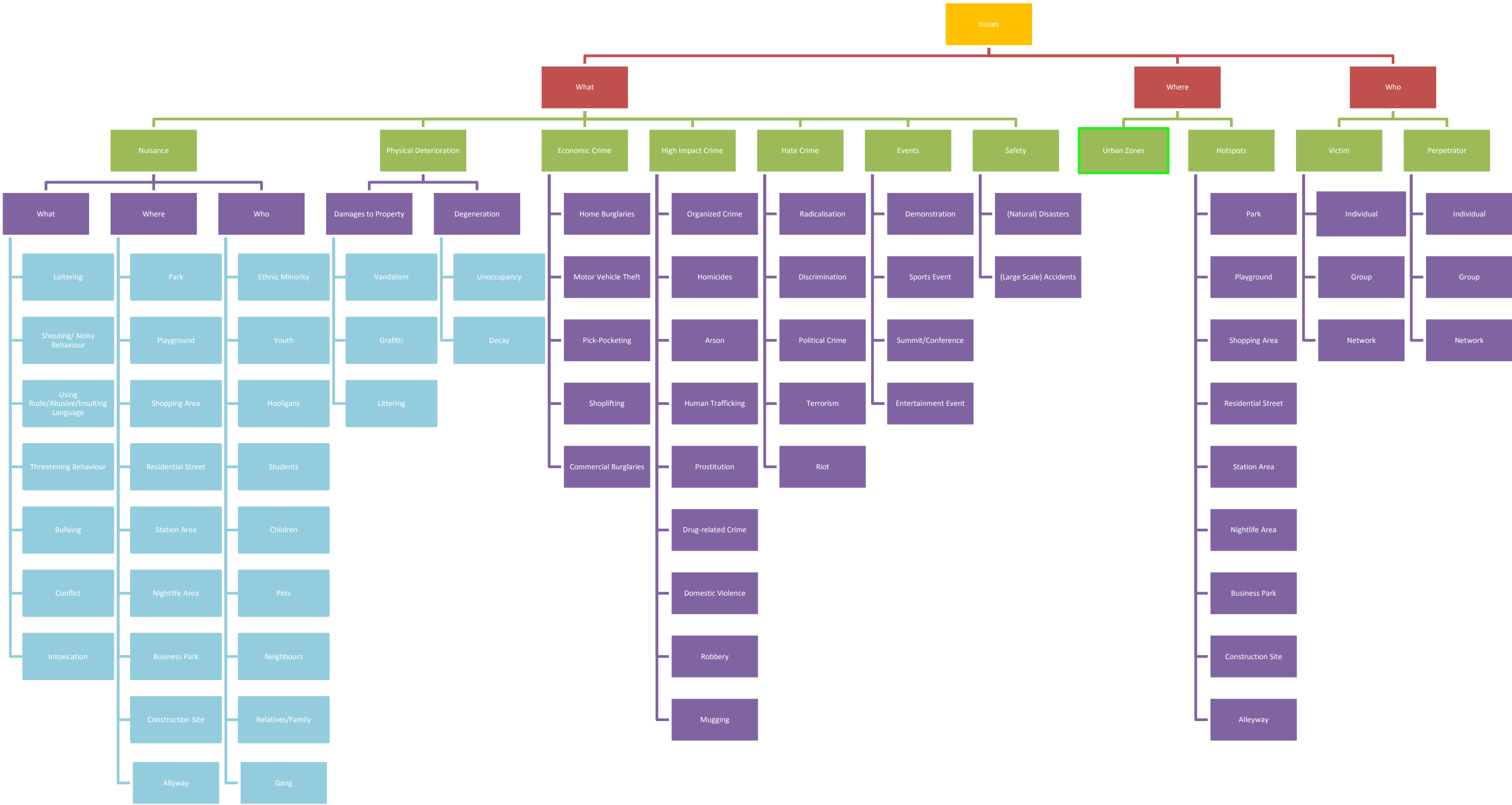
4. The next steps

In this document we presented the draft version of the case study registry. We focussed on the explanation what the registry is, how it is used, and what its functions are in relation to the tasks of WP6 and BESECURE in general. We mentioned several times that it is a work in progress that will be further developed and refined as the project progresses. In this final chapter we want to take a moment to look ahead at some of the main steps that need to be taken. In Table 4.1 these steps are presented in terms of aim (what), timeframe (when) and contributing parties (who).

Table 4.1 – Development steps of the case study registry

Step	Aim	Timeframe	Contributing parties
Refining and finalising the coding structure based on incoming information from case study research and desk research	Adjusting the categories	Each phase of the case study research will provide more detailed input. The consolidated version will be ready by M24	Input is provided by WP1 and WP5. The development of the coding structure is done by WP6, in cooperation with WP1 and WP2
	Adding new categories		
	Breaking down into further levels of categorisation		
Determining the reference codes for items in the registry	Designing a system that will provide each piece of information with a unique code that positions it vis-à-vis other pieces of information (proximity, similarity, difference)	The design of the system and how it works will be ready by M18 (D6.2)	WP6 is in the lead for the comparative method (D6.2), working closely together with WP2 and WP3
Putting weights to the variables	Determining the weights of each variable and incorporating these weights in the reference coding system	The design of the system and how it works will be ready by M18 (D6.2). The consolidated version will be ready by M24	Input is provided by WP1 and WP5. The development of the coding structure is done by WP6, in cooperation with WP1 and WP2

Appendix A – Coding structure for the ISSUES

Issues

What

Nuisance

What
- Loitering
- Shouting/ Noisy Behaviour
- Using Rude/Abusive/Insulting Language
- Threatening Behaviour
- Bullying
- Conflict
- Intoxication

Where
- Park
- Playground
- Shopping Area
- Residential Street
- Station Area
- Nightlife Area
- Business Park
- Construction Site
- Allyway

Who
- Ethnic Minority
- Youth
- Hooligans
- Students
- Children
- Pets
- Neighbours
- Relatives/Family
- Gang

Physical Deterioration

Damages to Property
- Vandalism
- Grafitti
- Littering

Degeneration
- Unoccupancy
- Decay

Economic Crime
- Home Burglaries
- Motor Vehicle Theft
- Pick-Pocketing
- Shoplifting
- Commercial Burglaries

High Impact Crime
- Organized Crime
- Homicides
- Arson
- Human Trafficking
- Prostitution
- Drug-related Crime
- Domestic Violence
- Robbery
- Mugging

Hate Crime
- Radicalisation
- Discrimination
- Political Crime
- Terrorism
- Riot

Events
- Demonstration
- Sports Event
- Summit/Conference
- Entertainment Event

Safety
- (Natural) Disasters
- (Large Scale) Accidents

Where

Urban Zones

Hotspots
- Park
- Playground
- Shopping Area
- Residential Street
- Station Area
- Nightlife Area
- Business Park
- Construction Site
- Alleyway

Who

Victim
- Individual
- Group
- Network

Perpetrator
- Individual
- Group
- Network

Appendix B – Coding structure for the APPROACHES