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# Modelling the Prison Life Index with Value Focused Thinking Methodology

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## Abstract

Building a composite index (CI) is a delicate work implying a series of decisions which consequences will determine the scope of the tool. This is especially true for the very first steps of this construction: the definition of the theoretical framework and the selection of relevant indicators, usually referred to as the construction of the model. However, the literature seems to focus more on the other aspects, quite often eluding those first critical steps or considering it self-evident. How to ensure the soundness of those tools when the values that they convey are not even clearly expressed? How to ensure the completeness of the model according to the reality that it ought to synthesise when it's a highly complex or abstract one? Each of these steps involves hypotheses and presuppositions that must be explained and evaluated with care. In this article, we seek to identify a coherent method that will fit that very purpose. Our primary hypothesis, following recent work, is that conceiving CIs as potential decision problems is a relevant approach. It allows to solicit the Multi Criteria Decision Aiding theory, that is rich in modelling methodologies – such as Ralph Keeney's Value Focused Thinking. Using a real-life application, the construction of the *Prison Life Index*, we try to show the relevance of those primary hypothesis by displaying the model of the index and summarizing the

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stage of its construction. This adapted methodology can guide index builders in the determination of a model that comprehensively fits its intended purpose and that isn't overly dependent on available data.

**Keywords:** composite indicator, modelling, prison, value focus thinking, international norms, multicriteria decision aiding

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## 1 Introduction

In this article, we present the model of the *Prison Life Index* (*PLI*) and the methodology used to define it. The *PLI* is a composite indicator (CI) designed to evaluate the results of national prison policies based on the standards for detention conditions set by international organisations. For the conception of a composite indicator, its modelling and the definition of its goals are the ultimate phases. When an indicator addresses a societal issue, such as the *PLI*, values must be the guiding principle for defining and modelling it. A deep effort must be put, early on, into specifying these values. Unfortunately, many CIs are defined in terms of data availability without any prior serious reflection on the values. The modelling phase is often done in an opaque way, without the use of a clear and reproducible methodology. In this paper we want to stress that the modelling phase of a CI is as important as the choice of aggregation parameters or the availability and the quality of data. We believe that CIs should be value-guided instead of data-guided, as it is commonly the case. A data-guided modelling may prevent the decision makers from asking questions about what is essential (ethical and moral values), may restrict them to only focusing on the existing data and hence, may reflect only a part of their values. In order to avoid such inconveniences, the conception of *PLI* is based on Multi Criteria Decision Making (MCDA) techniques (BannaeCosta1996[2] ; Grecoandal2019 [13]). The modelling step follows the principles of Value-Focused Thinking (VFT), a methodology proposed by Ralph Keeney (Keeney1992[14]). To our knowledge, R. Keeney is the first researcher to have put values in the centre of a decision process. In this paper we hope to show that the modelling steps of his method, initially designed for choice problems, are also meaningful and adapted for composite indicators. The value-guided modelling requires obviously a deeper and more time-consuming study than a data-guided modelling.<sup>1</sup>

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<sup>1</sup>Of course we also believe that data play an important role in value-guided modelling. A deep investigation has to be conducted on their availability and reliability but this has to be done once the CI model is defined with respect to the values. The data should not be the starting point

The model presented in this article for instance is the result of a year of collective pluri-disciplinary work (initiated by the non-profit organisation Prison Insider and framed by two public research laboratories) <sup>2</sup>.

The present article contribution is twofold :

- The presentation of the *PLI* model, comprehensible, reproducible and acceptable model which we expect to be as complete as possible and representing as best as possible the values of the involved stakeholders and standards.
- The presentation of its modelling methodology. Doing this we hope to underline the relevance of MCDA techniques for index building, starting by the very first steps: the definition of the problem (what is to be measured) and the construction of the model.

Our article is organised as follows: we present the general characteristics of CIs and the initial constraints set in the implementation of the *PLI*. We then justify and present the method selected to build the model of our CI and show the concrete application. We end by discussing the advantages and shortcomings of this method.

## 2 Developing a composite indicator to evaluate prison conditions in the world

### 2.1 Setting the objectives of the *Prison Life Index*

The *PLI* is being developed in a desire to alleviate an important economic and social problem which is the absence of clear and centralised information about the conditions of incarceration of individuals. The objectives of the *PLI* are to make prison systems readable and accessible to all, and enable action for better respect of the fundamental rights of prisoners.

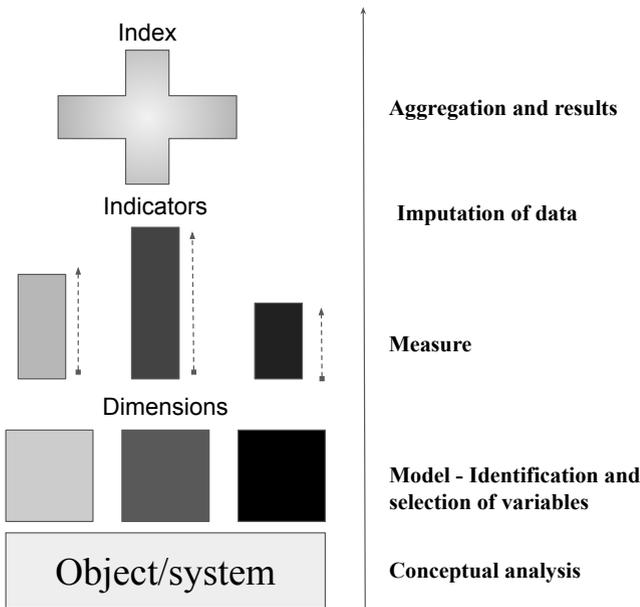
### 2.2 Determining initial constraints

Composite indicators are aggregations of several indicators representing different dimensions of the same object/system (SaisanaTarantola2002[27]). Even though the definition might be variable according to authors (Grecoal2019[13]), composite indexes are generally composed of the following notions : a concept, whether it is a system or phenomenon measured or evaluated, a model (or modelling) expressing the different dimensions of such concepts by a series of selected variables and an aggregation model leading to the final results (see Figure 1).

We have chosen to define a CI to evaluate life in prisons since the characteristics of CI fit the needs previously identified: they are designed

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<sup>2</sup>The LAMSADE (Laboratory for Analysis and Modelling of Systems for Decision Aiding) is a joint laboratory of Paris Dauphine Université and the French National Centre for Scientific Research, hosting scholars from a variety of disciplines (informatics, mathematics, economics.) The LIRSA (Interdisciplinary research centre in action-oriented sciences) is a pluridisciplinary research laboratory and is part of the National conservatory of arts and crafts (Le Cnam, Paris).



**Fig. 1** Composition of an index - Adapted from Boulanger Figure 1. From concept to index - (Boulanger2008[7])

to catch the public's attention (KelleySimmons2020[16]) and are perceived as communication tools and/or pragmatic action (DialgaLe2014[10]; BeaumontTownns2021[4]). They are the result of a compromise between the need for scientific exactitude, information available at reasonable cost (SaisanaTarantola2002[27]) and the necessity of being intelligible (Paruoloal2013 [21] ; Saltelli2007[28]). Naturally, a CI has to satisfy some properties in order to be acceptable and useful. For instance the *Handbook on Constructing Composite Indicators of the Organisation for Economic Cooperation and Development (OECD2008[19])* and *Indicators for Human Rights Based Approaches to Development in UNDP Programming : A Users' Guide of the United Nations Development Program (UNDP2006[31])* recommend to have meaningful, understandable, reliable<sup>3</sup> and robust<sup>4</sup> indicators.

Besides these properties, we have identified others, through interviews and collective meetings, which are not often put forward in the literature and/or which are specific to our study framework :

- **No ranking.** The aim of the index is not to compare countries. Its purpose is to provide an absolute and not a relative evaluation of a country (Roy1985[26]). This means an evaluation that provides information about

<sup>3</sup>Checking the quality and availability of data

<sup>4</sup>Both the selected data and the weighting and aggregation formula should be selected according to the theoretical framework and tested through sensitivity and robustness analysis ensuring the soundness of the model.

the intrinsic value of an item (BanaeCosta1996[2]) rather than comparing the items amongst themselves. Such an evaluation must also allow tracking a country's evolution over time.

- **Non-compensability between some dimensions of rights.** We believe that some dimensions, such as health, security, and sociability must not compensate for one another (for instance a prison with a functioning medical care system can not compensate for high insecurity).
- **No pre-existing data.** Very little comparable data exists throughout the world regarding prison conditions. There are even fewer calculated with consistency and reliability. Because of this, it was decided that the PLI will not directly rely on this pre-existing dataset but will seek to collect its own data, mainly through evaluations of experts.

We have also some constraints for modelling phase:

- **Based on the perspective of individuals.** The aim of the index is to give a viewpoint on prison life and not general information about the overall penitentiary systems across the world. The index will not use available structural data such as the number of prisons in a given country, the size of the prison, etc. Instead, the results displayed will focus on the prisoners' perspectives and their experience of daily life. The dimensions of the *PLI* will reflect the key aspects of life in detention : being connected to one's loved ones and society, being protected from any form of physical or psychological violence, having access to proper food, accommodation and hygiene conditions, having access to healthcare and being able to stay active through work, education or diverse activities.
- **Need for a complete model based on values.** This constraint is more generally the results of all the previous ones. The index aims at being a comprehensive description of prison life. Its model should have a descriptive value and will be based on ethical and moral values rooted in standards and in the defence of human dignity.

## 2.3 Using MCDA for modelling

In this article, we focus on the first steps of index-building which are the definition of the theoretical framework (term used by OECD2008[19]) and the construction of the model by the determination of its components and selection of relevant indicators.

### 2.3.1 Absence of a clear modelling methodology for CIs

There are a large number of manuals aimed at professionals, administrators, the media or more generally the general public explaining how to construct a "good" CI. Some are produced directly by international organizations facing the increasing number of CIs in public policy and broad political discourse (Merry2016[18] ; KelleySimmons2020[16]) such as the Organization of Economic Cooperation and Development (OECD2008)[19], the Council of Europe

(CoE2005[9]), the United Nations Human Rights Office (UNHRO2012[32]) or the United Nations Development Program (UNDP2006[31]). The aim of those tools is the uniformisation of index-building methodologies. The designers of those manuals state the importance of basing the indicators on solid conceptual foundations so as not to reduce the exercise of index-building to the random establishment of a list of possibilities. But they do not propose any clear or reproducible methodology to do so. This tendency can also be observed in the literature addressing index-building. The question of the selection of the method used to build the model is sometimes simply evaded (DialgaLe2014[10]; Grecoal2019[13]; ElGibarial2019[11]) or quickly mentioned as an important step (SaisanaTarantola2002[27], Saltelli2007[28]) or even problematic (Barclayal2018[3], Booysen2002[6]). As a result, although the building of the model is identified as a crucial process, embodying how the evaluated object/system is conceptualised, we have identified no clear modelling methodology through this literature review.

### 2.3.2 MCDA perspective

The absence of modelling methodology, the constraints presented in subsection 2.2 and our wish to put values in the centre of the model, directed us to the choice of the MCDA techniques for the conception of *PLI*.

MCDA can be defined as “the activity of people using models to help to obtain elements of responses to the questions asked by stakeholders in a decision process” (Grecoal2016[13]). It is a “scientific process aiming to frame decision-making problems and develop a comprehensive assessment of alternatives” (Cinellial2022[8]). As shown in recent work (see for e.g. ElGibarial2019[11]), MCDA has been increasingly used to build indicators, especially when their aim is to evaluate complex and abstract realities. Indeed, MCDA focuses in providing transparent and coherent support for the comprehension of complex situations that might hold conflictive objectives (Kpoumiéal2012[17]). Not only the construction of a composite indicator is a delicate work implying a series of decisions and choices when combining criteria (Beckeral2016[5]) but MCDA techniques seem highly suitable in multidimensional frameworks when aggregating single indicators into a composite one (SaisanaTarantola2005[27]). Both MCDA and index design are heavily focused on the construction of a model. They are also an aggregation matter: MCDA focuses on the aggregation of criteria when CIs focus on the aggregation of single indicators.

Our hypothesis is not only that MCDA techniques are fit to design indexes that are meaningful, comprehensive, understandable, reliable and robust but that they are particularly adapted in the cases of the initial constraints as described in subsection 2.2 as described in Table 1 below.

We still have two constraints left from subsection 7: Need for a complete model based on values and based on the perspective of individuals. As we will explain in the next sections, the Value-Focused Thinking methodology, proposed by Keeney (Keeney1992[14]) for MCDA, perfectly meets these two

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**Table 1** Correspondence between the initial constraints of the PLI and MCDA techniques' characteristics

<b>Constraint</b>	<b>MCDA Solution</b>
<i>No ranking</i>	MCDA techniques allow the construction of models that evaluate a given object/system according to its characteristics. As previously mentioned, even though they are commonly used to make a choice or a rank, there are also methods designed in order to evaluate an object/system in an absolute way, which is the main concern of ordinal classification problems (problematic of sorting).
<i>Non-compensatory aggregation model</i>	Many techniques in MCDA adopt a non-compensatory approach. The absence of compensability between criteria is commonly identified when eliciting decision-makers' preference. As an example, the pairwise comparison approaches such as ELECTRE methods provide the possibility of defining vetoes, which can be used to avoid compensations.
<i>No pre-existing data</i>	We cannot build our model with existing data - since data on prisons is not always available and/or of good quality). For this reason we decided to use expert evaluations for different attributes of our model (/footnoteObviously such a decision has important consequences on the data collection, for instance on the framing of the expert interview procedure which must be done with a high level of vigilance to decrease the subjectivities. This brings advantages and disadvantages that we hope to discuss in detail in a next article which will be dedicated to data collection and aggregation.. These qualitative evaluations will be aggregated in different steps of the model. Qualitative expert evaluations are generally ordinal data, they must be used very carefully. For instance, they cannot be aggregated by a simple weighted sum, as it is often done for CIs. MCDA has some specific methods designed for the aggregation of ordinal data and allows to manipulate them without any loss of information or without doing inappropriate manipulations like using a weighted sum with ordinal scores (Grecoal2016[12]).

constraints. We start by presenting Value-Focused Thinking as it is designed for decision making.

### 3 Choice of a methodology for the definition of the problem and its model – introducing Value Focused Thinking

We are looking for a systematic method that will allow us to synthesise the points of view of a number of decision-makers (10 people) and that is adapted for a multi-dimensional context involving complex problems. This method should allow the reflection of the ethical and social values of the decision-makers, related to conditions of detention. Finally, it should be able to take into account the desirable properties identified through our literature review (meaningful, acceptable, reliable, robust, etc.). We believe that VFT is the perfect answer to these needs. In this respect, we rely on the work of Rousval and Bouyssou (RousvalBouyssou2008[25]) that previously used R. Keeney's VFT to build a tool of multi-criteria aiding evaluation in the context of the transport and environmental field (see also Rousval2005[24].)

#### 3.1 *Value Focused Thinking* as a potential modelling methodology

VFT was thoroughly theorised in the landmark book *Value Focused Thinking. A Path for Creative Decision-Making* (Keeney1992[14]). The method focuses on a philosophy of decision making that can use the techniques of the Multi Attribute Value Theory/Multi Attribute Value Theory. However, it seeks to reverse most of the methods theorised so far by focusing not on the existing alternatives but on the values of the decision maker. VFT is a method designed to articulate the values held by the decision-maker by identifying and structuring objectives qualitatively. VFT is widely used in complex problem situations (VeraoBelderrain2022[33]) and is an important application and research area notably in MCDA (Parnellal2013[20]) for its capacity to model the problem and decision maker's objectives (Alencaral2017[1]). VFT has numerous applications and the theory is continuously developed by authors throughout the world (Parnellal2013[20].) The review led by Parnell (Parnellal2013[20]) and completed by Verão and Belderrain (VeraoBelderrain2022[33]) identifies that the main applications of VFT are in the domain of environment and energy efficiency, information and communication, military, education and risk analysis. We schematized Keeney's as follows :<sup>5</sup>.

- **Creation of the initial list of objectives.** The VFT method is used in complex situations holding many implications. The first step consists in drawing up a first list of objectives by identifying the **decision context**, the **relevant values of the decision-maker** (DM) and eliciting the related **objectives**. An **objective** is the statement of something that the DM wants to achieve in the given decision context. It articulates, in a coherent way, the

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<sup>5</sup>There are a variety of ways of structuring VFT in the literature, as shown by Verao and Belderrain (VeraoBelderrain2022[33]). However, we choose a breakdown close to the structure proposed by R.Keeney (Keeney1996[15])

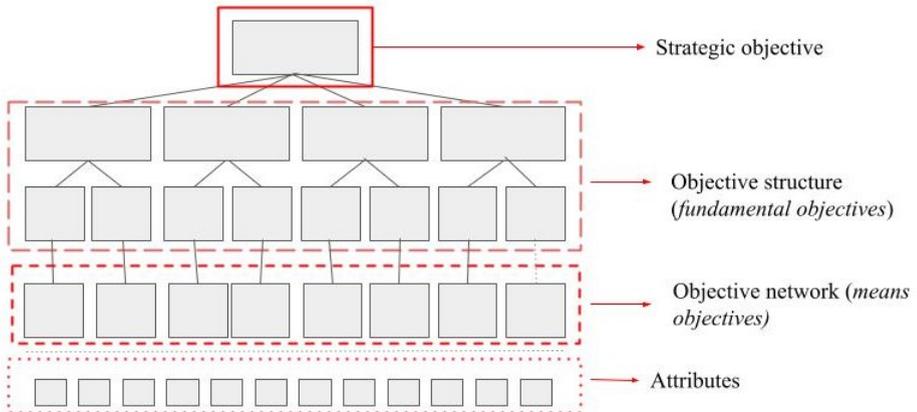
**values** that the analysis must have taken care to detail during the first stage. This need for clarification arises naturally from the process that follows the initial listing of values.

- **Categorization of objectives and organisation of a logical structure.** There are two categories of objectives: **fundamental objectives** and **means objectives**. An objective is said to be fundamental when it is an essential motive of interest for the decision situation. Means objective describes the way in which any fundamental objective can be achieved. This categorization is followed by a *structuration* process, since some objectives are more important, or broader, than others in the identified decision context. The **objective structure**, a fundamental hierarchy of objectives, allows the meaning and all the implications of the strategic objective to be expressed as well as its consequences on the nature of the decision to be taken. The **objective network**, a means-ends network, expresses how to get there. Once those networks are completed, it is necessary to use them both synergistically and to connect them: “the possible consequences in terms of the achievement of fundamental objectives are calculated based on the objectives network” (Keeney1992[14], p.91.)
- **Determination of related attributes** An attribute measures the degree to which an objective is achieved by providing a measurability. In general, so-called constructed attributes involve the determination and description of several distinct levels of impacts that clearly indicate the extent to which the associated objective is achieved. It is essential that the descriptions of these levels of impacts are unambiguous for all parties affected by the decision. They therefore generally correspond to subjective scales or indicators. These attributes, whatever their form is, must have a series of qualities: measurability, operationality, and understandability.
- **Use of objectives to create an alternative and identification of a worthwhile decision opportunity.** Once these attributes have been determined, R. Keeney undertakes the construction of a value model using an additive utility to identify the “best” alternatives. **In this article, we are only interested in the modelling phase of VFT** which corresponds to the previous three steps.

As a conclusion, VTF allows a formalisation of the objectives by structuring them in a hierarchical tree as can be observed in Figure 2. The objectives at the highest level are more abstract and complex, when the objectives at the lowest level are concrete and measurable through attributes. This disposition is close to the model of a CI where a concept is expressed by its components that are themselves measured by indicators.

### 3.2 Why Value Focused Thinking for the *Prison Life Index*?

We propose to VFT use it as a way to assist index-conceptors. This is possible since VFT offers enough flexibility to be adapted to our context.



**Fig. 2** Hierarchy of objectives according to VFT

Many composite indices are constructed from existing data, which constrains them in their exercise of conceptualization. They draw from existing databases in order to approximate a reality (see the *Human Development Index*, for example.) We call such CIs data-guided indexes. We wish to take a different approach and build a CI from identified values in a transparent, explicable and clear way. We want to propose a model which illustrates the standards related to prison conditions throughout the world by creating a value-guided index.

In the following section, we will show how we applied VFT in our context.

## 4 Applying Value Focused Thinking to model the Prison Life Index

### 4.1 Values and context as core elements of the conceptual analysis

In the spirit of VFT, we first proceeded to the identification of the values and a clear delimitation of the decision context of our index. These steps were conducted through collective and individual interviews with the decision-makers during the first few months. After each interview, the results were written until a final document defining the general characteristics of the *PLI* was drafted and approved by consensus in plenary session.

#### 4.1.1 Identification of the decision-maker

The first step is to define the framework and setting. It concerns decision makers, analysts and experts of our project. Table 2 below presents these three categories of participants.

**Table 2** Stakeholders and their status in the PLI

<b>Status</b>	<b>Stakeholders</b>
<i>Decision maker</i>	<ul style="list-style-type: none"> <li>• Prison Insider’s permanent team</li> <li>• An interdisciplinary consortium of 10 members : researchers (public and criminal law, computer sciences and mathematics), a former member of national penitentiary administration and members active in civil society organisations (CSOs) working on prisoners’ rights. Our DMs are collectively interviewed during plenary sessions to identify their common values, as the VFT methodology suggests. Their expertise is also solicited in the construction of the structure of objectives which relies on their knowledge and expertise on prisons throughout the world.</li> </ul>
<i>Analysts</i>	Researchers from the LIRSA and LAMSADE laboratories. They provide expertise, lead and coordinate the interviews with the consortium and Prison Insider’s team
<i>Experts</i>	A pool of 170 individual experts participate in the PLI : <ul style="list-style-type: none"> <li>• 20 experts were consulted during the modelling process to provide knowledge and critical perspective</li> <li>• 150 experts will be solicited during the data collection</li> </ul>

#### 4.1.2 Definition of the context and object/system

The first task is to define the context which will act as a framework in R. Keeney’s methodology. This was done over the course of several interviews. Collective interviews were preferred over individual ones, as the main objective here was to build consensus on one of the most crucial points of the collective work. The decision context<sup>6</sup> is defined as “evaluation of prison conditions throughout the world.”

Once the contexts are defined and agreed upon, we draw on this first step to identify common values between the decision-makers.

#### 4.1.3 Identification of values

In our case, even if there are many decision-makers, they share common values regarding our decision context. The identification of values was done in two steps. First, we integrated the discussion about values within the broader question of the definition of the contexts of the project. We rapidly identified

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<sup>6</sup>For the purpose of this article, we voluntarily use R. Keeney’s exact vocabulary, including the expression “decision context” even if we specified that we are more in an “evaluation context” than a “decision context”.

that the values shared by the decision-makers within this context could be categorised in two main categories: ethical values and methodological values.

- The ethical values revolve mainly around the concepts of human rights and dignity of all humans
- The methodological values revolve around the idea that the *PLI* should balance four necessities which are appeal to a broad audience (1), be methodologically sound (2), create consensus (3) and be transparent (4)

## 4.2 Creation of an objective structure as the model of the *PLI*

### 4.2.1 Identification of a series of objectives and categorisation of objectives

Going back to the decision context (“evaluate prison conditions”) and the values defined during the first stages as well as the object/system - we identified that the ethical values could be operationalised into fundamental objectives (“what does it mean”) and the methodological values into means objectives (“how to do it”).

Indeed, when we used the techniques proposed by R. Keeney (Keeney1996[15]) to elicit the objectives, we observed that they mixed transversal methodological aspects (be transparent, be acceptable for all countries of the world, avoid compensation between non-compensable fundamental rights such as the right to live and the right to see one’s family) that could be transformed in means objectives and both descriptive/normative aspects (to meet the minimum standards, prison life should mean the ability of staying connected to the exterior world, being protected from any type of harm, having access to comprehensive healthcare) that could be transformed into fundamental objectives. This categorization in two types of objectives as advised by R. Keeney is followed by the organisation in logical structures. The objective structure of fundamental objectives will constitute the modelling of our index. **This is where VFT and index building meet.**

### 4.2.2 Structuration of the objective structure through specification

Starting from the decision context and the objectives already identified, the group identified through “hard thinking” (Keeney1992[14]) five main dimensions that represented the key aspects of life in detention :

- 1. Eating, sleeping, showering
- 2. Having access to medical care
- 3. Being protected from physical and psychological harm
- 4. Being able to maintain connections with the outside world, especially one’s family
- 5. Being active

Those five dimensions denote the characteristics of the fundamental objectives as defined by R. Keeney (Keeney1992[14]). Neither of them is more important than the other, all are essential in the sense that they represent central aspects of life, in general, an even more life in detention. They are perfectly understandable and, with a thorough effort of definition, they avoid redundancy.

### **4.2.3 Development of the objective structure for each fundamental objective**

The VFT methodology allowed us, at first, to work independently on each fundamental objective, i.e. dimensions. We created groups composed of the members of the consortium and of the research team to work on the creation of the structure of each dimension. Each group was constituted according to the expertise of the members. The VFT method was presented during a plenary meeting to familiarise the members of the consortium. Each group was provided with the same instructions. Their work was accompanied and guided by the presence of a member of the scientific team, both during the sessions and in subsequent exchanges. The instructions can be summarised as such:

- To meet at least three times for two hours sessions over the course of several months
- To create a hierarchical structure where each level is semantically connected to the higher level
- To work downwards until easily measurable objectives are identified, that cannot be deconstructed further

Each of the five groups presented the result of their work at the following plenary meeting, with general discussion leading to further re-adjustments. The object of this article is to present the methodology and its end result rather than detail the entire process. We present in Table 3 below one example from the working group that tackled the dimension “Eating, sleeping, showering” (see the following tables).

**Table 3** Definition of the dimension “Eating, sleeping, showering”

<i>Leading question</i>	What is the definition of the dimension ?
<i>Proposed answer</i>	This dimension refers to the material conditions and satisfaction of the most basic yet essential needs of any individual : food, water, accommodation, personal hygiene. Prisoners often depend almost on the administration for the satisfaction of these needs. They provide expertise, lead and coordinate the interviews with the consortium and Prison Insider’s team
<i>Leading question</i>	What are the important elements regarding material conditions in detention ?
<i>Proposed answer</i>	Having access to decent food and water, having somewhere decent to sleep, being able to shower in decent conditions, and having access to running water.
<i>Leading question</i>	Is there a hierarchy between those dimensions? Are they redundant with others? Why is this objective important (following the causal relationship identified by Keeney1996[15])?
<i>Proposed answer</i>	Three central dimensions that we identified are: food and water, accommodation and personal hygiene. They are clearly not redundant. They are important because they constitute essential material conditions to have a dignified life. This leads to the determination of the three main sub-dimensions defining the dimension “Eating, sleeping and showering” : Food, Accommodation and Personal hygiene.
<i>Leading question</i>	What do you mean by this objective? (Structuring objectives, according to Keeney (Keeney1996))
<i>Proposed answer</i>	For each of the three-sub dimensions, we obtained the following organisation : <ul style="list-style-type: none"> <li>• <b>Food</b> : ”1. Prisoners have access to portable water” and ”2.Prisoners have access to food”</li> <li>• <b>Accomodation</b> : ”1. Prisoners benefit from sufficient living space per person”, ”2.Prisoners can sleep in good conditions” and ”3. The premises are in good condition, clean and accessible”</li> <li>• <b>Personnal hygiene</b> : ”1. Adequate sanitation facilities allow prisoners to maintain their personal hygiene”, ”2. Prisoners have access to toilet articles” and ”3. Prisoners have access to clothing”</li> </ul>

Through these two stages we used VFT to define each dimension, that is to say we constructed the objective structure for each of the fundamental objectives defined through the preliminary work. Each structure is composed by the dimension (here **Eating, sleeping and showering**), a series of sub-dimensions (here **Food, Accommodation and Personal hygiene**) and their corresponding indicators which are the most precise branches of the structure<sup>7</sup>. This led us to define a first version of the modelling of the *PLI*, that still needed to be consolidated and for which we needed to specify the attributes.

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<sup>7</sup>Please note that not all the dimensions are built symmetrically. Some structures have more levels than the branch we display. To see the complete model, please see Annex 7.

### 4.3 Consolidating the model

This additional step does not exist in R. Keeney’s method. It was added specifically to fit the purpose of building the PLI. Once the work of the sub-groups was presented and put in common during a plenary meeting, it was determined that two further steps were necessary to validate the final model:

- **Verification of the model obtained with respect to the minimum international standards** : the work on all dimensions appealed heavily to the knowledge and experience of the members of the consortium who defined the subdimensions and attributes using the VFT techniques. However, since one of the methodological values identified was the acceptability and the universality of the model, we decided to confront the modelling obtained to the existing set of international standards regarding prison conditions as defined by international organisations such as the United Nations (UN) and the International Labour Organisation (ILO).
- **Input by external experts and desk research** : although the members of the consortium are the ultimate decision-makers in our model, a need for external audit on specific questions such as the situation of minors in detention (whether they are detained or not), women incarcerated and access to mental health treatment was identified.

In the following subsections, we will provide some details on these two points.

#### 4.3.1 Systematic review of standards and of our model

According to Scalia and Lessene, “several soft law instruments have been drafted to guide States when depriving a person of their liberty and for such persons to be treated humanely” (ScaliaLessene2019[30], see also Scalia2015[29]). This set of international normative instruments constitutes what must be considered the international minimal standards in terms of detention. It was decided that the PLI should not include any dimension, sub-dimension or indicator that was not explicitly cited in those international minimal standards in terms of detention for three main reasons.

The introduction of such international norms are an interesting addition to the use of VFT to define the model of the PLI. On one hand, we are still talking about values since those norms technically could be defined as the highest level of international consensus around minimal standards in regard to prison conditions. On the other hand, it introduces the possibilities of an evaluation since the model of the PLI, defined through international standards, will define what prison life should be like according to international standards.

The **first step** was to constitute the corpus. We identified 37 international texts that all had an international scope, that were conceived under the bosom of an international organisation such as the UN or the ILO and that could be applied to life in detention. The complete set of texts are accessible in Appendix A. Additional sources have moreover allowed us to understand how

the rights and standards defined by international standards are exercised and materialised in practice. The full list of the 30 additional sources as well as the justification of their selection can be found in Appendix B.

The **second step** was to check if every dimension, sub-dimension and indicator identified in the model of the PLI could correspond to a norm of the corpus.

The conclusion of this verification exercise shows the relevance of the use of VFT to build the model of the PLI:

- No standard relevant to prison conditions appeared to have been missing during the process of construction (present in the corpus but not in the model)
- However, some indicators in the model didn't seem to be backed by any of the norms identified in the selected corpus (present in the model but not in the corpus). This was the case for only a few of them, such as “the right to receive parcels” and “the right to connect to the internet.” According to the logic defined earlier, they were not kept in the model.

The result of this review is displayed in Table 7 available in Appendix C where we provide the corresponding international norms for each node of our model.

### 4.3.2 Input by external experts and desk research

After pooling the work of the various groups, a period of consultation with external experts was launched. This need was identified by the consortium after a general validation of the model. Some technical points seemed to require additional input. These points have been identified and experts called upon accordingly. The model was submitted to these identified external experts so that they could judge it according to their specific cutting-edge domain. When experts raised reservations on the model, we proposed to work from their suggestions and submit the proposed changes to collective validation. The consortium meetings in plenary then discussed and validated these specific parts of the model, and the issues and questions that require an external evaluation. Two specific needs for expertise were identified :

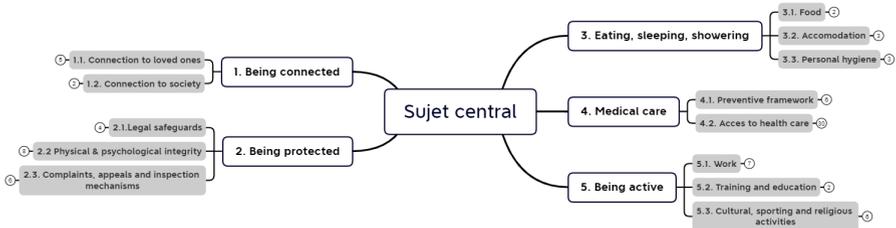
- Expertise on prison for specific sub-dimensions of the PLI such as health-care (including psychiatric and psychological care), activities or on specific populations such as women, minors or LGBTIQ+ prisoners
- Expertise in index building

On another hand, the necessity of testing the model on a diverse range of countries was raised. Indeed, prison systems vary consequently across the world.

We met with 30 experts through collective and individual interviews. The details are accessible in the table 8 available in the Appendix D.

The results of the interviews validated the vast majority of the model. Several modifications or additions were suggested on specific questions. The result of the test evaluation was conclusive.

#### 4.4 Presentation of the final model of the PLI



**Fig. 3** Final dimensions and sub-dimensions of the Prison Life Index

The complete list of indicators per dimensions as well as the association international standard are accessible in the Appendix D of this article where each sub-dimension of Figure 6 is also divided into specific indicators.

#### 4.5 Definition of the attributes - towards the evaluation

After having solidified and validated the model, we have identified five dimensions and their respective sub-dimensions and indicators (see Figure 6 and Appendix C). The final step of our work, aligned with R. Keeney's, is to determine for each of the indicators a series of attributes that will allow further data gathering. This is all the more relevant that we have already identified that the data that will be used in the frame of the PLI will be provided mainly from the evaluation of experts. For each indicator, the leading question was "how would you measure the success of this objective?" There again, we used the international standards as well as the additional sources identified during the previous stage to guide our thinking. We also made the strong methodological hypothesis that we could identify a common framing for all the indicators of the model. This was obtained through incremental work with the consortium, after having reviewed all the relevant international standards and additional sources for each indicator. We also tested with some experts the feasibility to obtain such evaluations for some countries. A common frame was identified as follows:

- Normative framework - is the right protected by a normative framework?
- The right in practice - can the right be exercised in practice?
- Potential restriction - do restrictions exist and if so, are they proportionate?
- Discrimination - is the practice of the right the same for all without any form of discrimination?

For each indicator, an evaluation guide was built according to the four identified categories. This evaluation guide displays all the relevant attributes of the indicators. The Table 4 displayed below shows a concrete example though the indicator 3.1.1. : “Prisoners have access to drinking water”

**Table 4** Stages of determination of attributes of the indicator 3.1.1.

Stage 1 – Identification of relevant standards and additional sources	
<i>Standard identified : Nelson Mandela Rule n°22</i>	Every prisoner shall be provided by the prison administration at the usual hours with food of nutritional value adequate for health and strength, of wholesome quality and well prepared and served. Drinking water shall be available to every prisoner whenever he or she needs it.
<i>Additional source identified : Association for the Prevention of Torture, Monitoring Immigration Detention - Practical Manual, rule 4.4.2</i>	Meals and drinks/water are provided at regular intervals
<i>Additional source identified : Association for the Prevention of Torture, Monitoring Place of Detention - A practical guide</i>	Drinking water shall be available to every prisoner whenever he needs it.
Stage 2 – Construction of the evaluation guide	
<i>Normative framework</i>	<ul style="list-style-type: none"> <li>• The right is recognized at the national level</li> <li>• The right is enshrined in the prison regulations</li> </ul>
<i>The right in practice</i>	<ul style="list-style-type: none"> <li>• Water is available whenever prisoners need it</li> <li>• Prisoners have access to sufficient water</li> <li>• The water is drinkable</li> </ul>
<i>Potential restrictions</i>	<ul style="list-style-type: none"> <li>• Access to water cannot be restricted as a disciplinary sanction</li> </ul>
<i>Discrimination</i>	<ul style="list-style-type: none"> <li>• Prisoners can have access to drinking water free of charge</li> <li>• The right to access drinking water is respected throughout the territory (including in peripheral areas or areas with strong constraints)</li> <li>• Prisoners benefit from this right, without any discrimination, in particular towards: women, prisoners subject to a stricter detention regime, people with disabilities, foreign people, people from ethnic and/or religious minorities, LGBTIQ+ people, minors, prisoners on remand, people with mental disorders</li> </ul>

Following this methodology, a first version of the model is successfully determined for each of the five dimensions. In the table below, we summarise the correspondence between the composition of an index, the VFT methodology and the different stages of the development of the *PLI*.

**Table 5** Summary of the correspondence between the composition of an index, the VFT methodology and the different stages of the development of the Prison Life Index

<i>Models of composite indicators (according to J.M. Boulanger[7])</i>	Value Focused Thinking (Keeney1992[14])	Prison Life Index
<i>Concept / theoretical framework</i>	Values, Decision context and objects	International Standards, Evaluation of prison conditions around the world
<i>Dimensions</i>	Fundamental objectives and objectives network	5 dimensions : Eating, sleeping, showering / Medical care / Protection / Being connected / Being active and each categories' own hierarchy of objectives
<i>Indicators</i>	Lowest objectives and their attributes	For each indicator : Normative framework, The right in practice, Potential restriction, Discrimination

## 5 Discussion

### 5.1 Advantages

**A model guided by values and transparency.** Indexes are not purely descriptive tools. They illustrate the values of their designers, their political and social conception of a given phenomenon (Merry2016[18] ; Prieur2021[22]). They adopt a normative perspective, and even prescriptive when they offer evaluations (KelleySimmons2020[16]). Yet these underlying assumptions are not always expressed and the assumptions and values of the index builders risk being hidden by the technological aspects of such tools. With VFT, we have identified a method that makes it possible to position oneself transparently and clearly in relation to the values of decision-makers.

**A comprehensive model of the initial problem: how to describe life in prison.** VFT is a step-by-step method. It allows the analyst to identify starting values and fundamental objectives, then to deduce the structure of

the model from this. This funnel-shaped method makes it possible to gradually identify the different components through analysis. It ultimately allows us to obtain a model that represents reality in a relatively comprehensive way.

**A disaggregated model.** The hierarchical model is built around 5 dimensions. Each of these have their own unit and own indicators. Each one represents their own decision problem. The dimensions are therefore independent (in terms of preference). This is obtained thanks to VTF.

**A pooling of knowledge about prisons in the world.** The modelling work of the PLI has attracted a very large number of diverse experts and is nourished by current knowledge and productions on prison conditions throughout the world. This fed into the work with the consortium. It was made possible thanks to the collaboration with a specialised NGO, Prison Insider. As such, we hope that the index has made it possible to accumulate as much knowledge as possible and will make it possible to process all the information available. This work was also the occasion for a systematic organisation of international standards relating to prison conditions. As can be seen in appendix C, we have organised them in such a way that they offer a thematic and global vision. This shows the interconnection, complementary and sometimes overlapping of these standards.

**A collective and pluridisciplinary working methodology.** We have adopted a pluridisciplinary approach since the beginning of the project, soliciting experts from a wide variety of fields and betting on the complementarity of knowledge and backgrounds (political sciences, sociology, public administration, criminology, statistics, civil society, etc.) The application of VFT to the construction of the PLI shows its ability to build solid consensus amongst the stakeholders by identifying and sharing common values.

## 5.2 Shortcomings

**A long-term task.** The model and the method that we present in this article are the fruit of a year and a half of work and brought together more than 50 international experts. This temporality is understood by the incremental dimension of the method which allows a progressive enrichment of the analysis. In the case of the PLI, it must also be understood as necessary for the construction of a consensus which can only be established over time and as the fruit of the exchange of points of view. This obviously raises questions : what would have happened if no form of consensus had been reached ? It also interrogates the question of the reproducibility of this method and the incentive to use it in other contexts.

**Need to conduct data collection.** The PLI model was not limited to available data. There is very little quantitative, reliable and comparable data available on the conditions of detention throughout the world. We select experts according to their capacity to process existing knowledge to offer an evaluation. No country has ever collected as such the data that we have identified as necessary. Thus, in a new phase of our work, we must collect this data for a certain number of countries in order to produce a pilot version. It is a long,

expensive and extremely difficult task. Poor quality data could compromise the interest of the index. This represents a real methodological and economic challenge. We are currently undergoing a series of exercises to test evaluation techniques and developing interview techniques to retrieve expert evaluations in a consensual manner. The issue here is to monitor the variability of evaluations according to the different perceptions of individuals. The subjectivity of experts' evaluation will be a real challenge for the construction of PLI.

**The limits of a synthetic representation.** Many realities are diluted in the model. If the data is collected on prisons in general, our assessments will for example not be able to specifically isolate the situation of women or minors. If we want to take their specific situation into account in the assessments, we will have to re-collect the data.

## 6 Conclusion

In this article, we have tried to show why the choice of Value Focused Thinking was a relevant choice in view of the objectives that we had set ourselves. We believe that this method is coherent for building index models that can be meaningful and comprehensive, understandable, reliable and robust (qualities that we identified in the introduction of this article) and we have tried to show why. We hope that the final model of the PLI comes as close as possible to reality and offers a model that makes sense to capture the multidimensionality and complexity of the concept being evaluated. The purpose of this article is also to show that the method is reproducible and adaptable to each index, from the moment it is considered as a decision problem . It allows the construction of very complex and multidimensional indices, each dimension of which can be identified as a decision-making sub-problem. Each dimension can be read on its own and has an intrinsic meaning. We believe that this method is particularly suited to human rights and development indicators that are guided by international norms and standards. Those types of indexes represent, to quote J.M. Boulanger (Boulanger2008[7] a “scientific challenge and a democratic issue.” The United Nations has called several times for the development of research around these tools and has produced a manual for constructing the human rights indicators that we have used in this article (UNHRO2012[32] ; RosgaSatterthwaite2008[23].) Finally, we have tried to show the interest of MCDA for the construction of composite indices, in line with recent work. Conceiving indices as decision-making problems provides understanding and tools for analysis and construction. The next step is the definition of our aggregation operators. As we already mentioned we are looking for non-compensatory methods. We hope to use some preference elicitation techniques with our decision makers in order to find the decision parameters of these operators (weights, thresholds, etc.). We are trying to develop evaluation techniques for our final attributes for which we need the experts' evaluations. We face a number of challenges here also : how to minimise the subjectivity, how to obtain consensus evaluations (for each of the five dimensions of our

model, a number of experts will give their evaluations), we also have to take into account the heterogeneity of prisons at the territorial level.

## 7 Annexes

### 7.1 Appendix A - List of international norms used to build the model of the Prison Life Index (table 6)

**Table 6:** List of international norms used to build the model of the *Prison Life Index*

General standards	
Name	Abbreviation
CO29 - Forced Labour Convention, 1930 (No. 29), International Labour Organisation	CO29
CO87 - Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87), International Labour Organisation	CO87
Universal Declaration of Human Rights, 10 December 1948, General Assembly resolution 217 A (III)	UDHR
CO98 - Right to Organise and Collective Bargaining Convention, 1949 (No. 98), International Labour Organisation	CO98
C100 - Equal Remuneration Convention, 1951 (No. 100), International Labour Organisation	C100
C105 - Abolition of Forced Labour Convention, 1957 (No. 105), International Labour Organisation	C105
C111 - Discrimination (Employment and Occupation) Convention, 1958 (No. 111), International Labour Organization	C11
International Convention on the Elimination of All Forms of Racial Discrimination, 21 December 1965, General Assembly, resolution 2106 A(XX), entry into force: 4 January 1969, in accordance with Article 19	AFRD
C138 - Minimum Age Convention, 1973 (No. 138), International Labour Organisation	C138
International Covenant on Civil and Political Rights, 16 December 1966, General Assembly resolution 2200 A (XXI), Entry into force: 23 March 1976, in accordance with article 49	ICCPR
International Covenant on Economic, Social and Cultural Rights, 16 December 1966, General Assembly, resolution 2200 A (XXI), entry into force: 3 January 1976, in accordance with article 27	ICESCR

Convention on the Elimination of All Forms of Discrimination against Women, 18 December 1979, General Assembly, resolution 34/180, entry into force: 3 September 1981, in accordance with article 27(1)	DAW
Declaration of Basic Principles of Justice for Victims of Crime and Abuse of Power, 20 November 1985, General Assembly, resolution 40/34	JVCAP
Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, 10 December 1984, General Assembly, resolution 39/46, entry into force: 26 June 1987, in accordance with article 27 (1)	CAT
Principles on the Effective Prevention and Investigation of Extra-legal, Arbitrary and Summary Executions, 24 May 1989, Economic and Social Council, resolution 1989/65	EASE
International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families, 18 December 1990, General Assembly, resolution 45/158, entry into force: 1 July 2003, in accordance with article 87(1)	PRMW
Principles for the protection of persons with mental illness and the improvement of mental health care, 17 December 1991, General Assembly, resolution 46/119	PPPMI
C182 - Worst Forms of Child Labour Convention, 1999 (No. 182), International Labour Organization	C182
Principles on the Effective Investigation and Documentation of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, 4 December 2000, General Assembly, resolution 55/89 annex	EIDT
Optional Protocol to the Convention against Torture and other Cruel, Inhuman or Degrading Treatment or Punishment, 18 December 2002, General Assembly, resolution A/RES/57/99, entry into force : 22 June 2006	OPCAT
International Convention for the Protection of All Persons from Enforced Disappearance, 20 December 2006, General Assembly, resolution A/RES/61/177, entry into force: 23 December 2010, in accordance with article 39(1)	PAPED
Convention on the Rights of Persons with Disabilities, 13 December 2006, General Assembly, A/RES/61/106, entry into force: 3 May 2008, in accordance with article 45(1)	CRPD

United Nations Principles for Older Persons, 16 December 1991, General Assembly, resolution 46/91	UNPOP
Principles for the protection of persons with mental illness and the improvement of mental health care, 17 December 1991, General Assembly, resolution 46/119	PPPMI
The Yogyakarta Principles, Principles on the application of international human rights law in relation to sexual orientation and gender identity, International Panel of Experts in International Human Rights Law and on Sexual Orientation and Gender Identity, 26 March 2007	YP
The Yogyakarta Principles plus 10, Additional Principles and State Obligations on the Application of International Human Rights Law in Relation to Sexual Orientation, Gender Identity, Gender Expression and Sex Characteristics to Complement the Yogyakarta Principles, International Panel of Experts in International Human Rights Law and on Sexual Orientation and Gender Identity, 10 November 2017	YP10
Standards regarding condition of incarceration	
Principles of Medical Ethics relevant to the Role of Health Personnel, particularly Physicians, in the Protection of Prisoners and Detainees against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, 18 December 1982, General Assembly, resolution 37/194	PME
Body of Principles for the Protection of All Persons under Any Form of Detention or Imprisonment, 09 December 1988, General Assembly, resolution 43/173	PAP
Basic Principles for the Treatment of Prisoners, 14 December 1990, General Assembly, resolution 45/111	BPTP
United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules), 17 December 2015, General Assembly, resolution 70/175	NMR
Basic Principles on the Use of Force and Firearms by Law Enforcement Officials, 07 September 1990, Eighth United Nations Congress on the Prevention of Crime and the Treatment of Offender	BPUF
Basic Principles on the Role of Lawyers, 07 September 1990, Eighth United Nations Congress on the Prevention of Crime and the Treatment of Offenders	BPRL

United Nations Rules for the Treatment of Women Prisoners and Non-custodial Measures for Women Offenders with their Commentary (the Bangkok Rules), 21 December 2010, General Assembly, A/RES/65/229	BKR
United Nations Standard Minimum Rules for the Administration of Juvenile Justice (The Beijing Rules), 1990	BR
United Nations Rules for the Protection of Juveniles Deprived of their Liberty, 14 December 1990, General Assembly, resolution 45/113	LHR

## 7.2 Appendix B – List of additional sources used to build the model of the *Prison Life Index*

- United Nations Offices (United Nations Office on Drugs and Crime, World Health Organisation, Joint United Nations Programme on HIV/AIDS )
  - **World Health Organisation**, Tuberculosis Control in Prisons: A Manual for Program Managers, Geneva, 2000
  - **United Nations Office on Drugs and Crime (UNODC)**, A Framework for Effective National Response, New York, 2006
  - **UNODC**, Handbook on prisoner file management, Criminal Justice Handbook Series, New York, 2008
  - **UNODC**, Handbook on Prisoners with special needs, Criminal Justice Handbook Series, New York, 2009
  - **UNODC**, Handbook for prison leaders, A basic training tool and curriculum for prison managers based on international standards and norms, Criminal Justice Handbook Series, New York, 2010
  - **UNODC**, Handbook on strategies to reduce overcrowding in prisons, Criminal Justice Handbook Series, New York, 2013
  - **UNODC**, Handbook on Women and Imprisonment, Criminal Justice Handbook Series, 2nd edition, with reference to the United Nations Rules for the Treatment of Women Prisoners and Non-custodial Measures for Women Offenders (The Bangkok Rules), New York 2014
  - **World Health Organisation**, Prison and Health, Edited by: Stefan Enggist, Lars Møller, Gauden Galea and Caroline Udesen, 2014
  - UNODC**, Handbook on Dynamic Security and Prison Intelligence, Criminal Justice Handbook Series, New York, 2015
  - **UNODC**, Handbook on the Management of High-Risk Prisoners, Criminal Justice Handbook Series, New York, 2016
  - **UNODC**, Roadmap for the Development of Prison-based Rehabilitation Programme, Criminal Justice Handbook Series, Vienna, 2017
  - **UNODC**, Assessing compliance with the Nelson Mandela Rules, A checklist for internal inspection mechanisms, Criminal Justice Handbook Series, New

York, 2017

- **Joint United Nations Programme on HIV/AIDS (UNAIDS)**,  
Update on HIV in prisons and other closed settings, Geneva, 2021

- Other sources

- Association for the prevention of torture (APT)//**

- **APT**, Monitoring Places of Detention : a practical guide, 2004
    - **APT**, Women in detention : a guide to gender sensitive monitoring, 2014
    - **APT**, Monitoring Immigration Detention - Practical manual, 2014
    - **APT**, Balancing security and dignity in prisons : a framework for preventive monitoring, 2015
    - **APT**, Towards the Effective Protection of LGBTI Persons Deprived of Liberty: A Monitoring Guide, 2019
    - **APT**, Older persons in detention : a framework for preventive monitoring, 2021

- International Committee of the Red Cross (ICRC)**

- **ICRC**, Water, Sanitation, Hygiene and Habitat in Prisons, 2013
    - **ICRC**, Children in detention, 2014
    - **ICRC**, Health Systems and Needs Assessment in Prisons - Practical Guide and Toolkit, 2015
    - **ICRC**, Health Care in Detention: Managing Scabies Outbreaks in Prison Settings, 2015
    - **ICRC**, Towards Humane Prisons : A Principled and Participatory Approach to Prison Managing and Design
    - **ICRC**, Ageing and Detention
    - **ICRC**, Safety and Dignity in strict detention regimes
    - **ICRC**, Health promotion in detention through peer-based interventions
    - **ICRC**, Sexual violence in detention
    - **ICRC**, Dignity in detention

- Institute for Crime and Policy Research (ICPR)**

- **ICPR**, A Human Rights Approach to Prison Management: Handbook for Prison Staff, 2019

- Penal Reform International**

- **PRI**, Guidance Document on the Nelson Mandela Rules. Implementing the United Nations Revised Standard Minimum Rules for the Treatment of Prisoners, 2018

### **7.3 Appendix C - List of all the indicators of the PLI and corresponding norms (table 7)**

**NB** : The abbreviations used are displayed in Table (Appendix B)

**Table 7:** List of all the indicators of the *PLI* and corresponding norms

<b>1. Being connected</b>	NMR 3 ; NMR 88 ; NMR 106 ; NMR 107 ; LHR 59 ; BKR 4 ; BKR 26; BKR 44 ; PAP 20 ; PRMW 44
<i>1.1. Connection to loved ones</i>	UDHR 16.3 ; ICCPR 23 ; ICESCR 23 ; BKR 26
1.1.1. Prisoners can exchange letters and e-mails with their loved ones	NMR 58 ; PAP 15 ; PAP 19 ; LHR 59 ; LHR 61
1.1.2. Prisoners can talk with their loved ones on the phone	PAP 15 ; PAP 19 ; LHR 59 ; LHR 61
1.1.3. Prisoners can receive visitors	NMR 58.1 ; NMR 58.2 ; NMR 59 ; NMR 60 ; PAP 19 ; RLH 60 ; BKR 4 ; BKR 27 ; BKR 28 ; BKR 43 ; BKR 44 ; PRMW 17.5 ; YP 9
1.1.4. Prisoners may be granted leave for urgent family reasons	RLH 59 ; BKR 45
1.1.5. Measures are in place to guarantee the best interests of the young children of prisoners	RLH 29 ; BKR 2.2 ; BKR 49 ; BKR 50 ; BKR 52.1 ; CRC 3 ; CRC 9 ; CRC 19
textit1.2. Connection to society	NMR 88
1.2.1. Prisoners have access to information and various media	ICCPR 19 ; NMR 63 ; NMR 117 ; RLH 62 ; CRC 17
1.2.2. Prisoners who have retained their right to vote may vote	UDHR 21.3 ; ICCPR 25 ; DAW 7
textbf2. Protection	UDHR 3 ; NMR 1 ; CAT 1 ; CAT 2
<i>2.1. Access to legal rights</i>	NMR 41
2.1.1. Prisoners can access a legal counsellor whenever they need	NMR 41 ; NMR 53 ; NMR 54 ; NMR 61 ; NMR 88.2. ; NMR 92.1 ; NMR 120.1 ; BPRL ; CRC 37.d
2.1.2. Prisoners are able to notify a third party in the event of detention, transfer, serious illness or injury (families, diplomatic representation)	NMR 62 ; PRMW 16 ; NMR 68 ; NMR 69 ; NMR 70 ; LHR 22 ; LHR 56
2.1.3 Prisoners each have a confidential file in the official, complete and up-to-date registers	NMR 7 ; NMR 8 ; NMR 9 ; BKR 2.1. ; BKR 3 ; LHR 19 ; LHR 20 ; LHR 21
2.1.4 Prisoners have access to the rules of procedure of the place they are being detained in	NMR 54 ; NMR 55 ; BKR 2.1. ; LHR 24
<i>2.2 Physical &amp; psychological integrity</i>	
2.2.1. There is a comprehensive preventive and protective framework	

2.2.1.1 Public regulation details the structure of a proportionate and appropriate disciplinary system	UDHR 11.1 ; NMR 39.1 ; NMR 37 ; NMR 43 ; NMR 44 ; NMR 47 ; NMR 48 ; NMR 50 ; NMR 51 ; NMR 52.1 ; NMR 73 ; CAT 16 ; BKR 20 ; BKR 22 ; BKR 23 ; BKR 24 ; YP 10 ; LHR 26 ; LHR 63 ; LHR 64 ; LHR 68 ; LHR 69
2.2.1.2. Prisoners in different categories are placed in separate establishments and wards	NMR 11 ; ICCPR 10.2 ; NMR 89 ; NMR 112.1 ; NMR 93.1. ; BKR 40 ; LHR 28 ; LHR29 ; LHR 30 ; NMR 109 ; PRMW 17 ; YP 9
2.2.1.3. The prison staff ensures the safety of prisoners	CAT 10 ; NMR 12.2. ; NMR 40 ; NMR 74.3 ; NMR 75 ; NMR 76 ; NMR 81 ; NMR 82.3 ; LHR 65 ; BKR 29 ; BKR 31 ; BKR 33 ; YP 9 ; LH 71 ; LHR 82 ; LHR 83 ; BPUF
2.2.2 The preventive measures are effective	
2.2.2.1. Prisoners are not subjected to physical harm	ICCPR 6 ; NMR 1 ; JVAP 18 - 21 ; CRPD 10 ; CRPD 15 : CRPD 17 ; YP 4-5 ; YP 10 ; PAPED
2.2.2.2. Discipline is applied in a proportionate way	UFF 15 ; UFF 16 ; NMR 36 ; NMR 38.1 ; NMR 38.2. ; NMR 41 ; NMR 45.1 ; NMR 49 ; NMR 82.1. ; BKR 21 ; BKR 22 ; BKR 23 ; LHR 66 ; LHR 70
2.2.2.3 Prisoners are not subjected to abusive, cruel, inhuman or degrading treatment	UDHR 5 ; ICCPR 7 ; CRC 37 ; YP 18 ; LHR 55 ; LHR 67
<i>2.3. Complaints, appeals and inspection measures</i>	
2.3.1. Inspection measures are in place	EIDT
2.3.1.1. Internal or administrative inspections are regularly carried out by the central administration	EASE 2 ; CRC 19 ; BKR 25.3
2.3.1.2. External inspections are regularly carried out by independent bodies	CAT 10 - 14 ; OPCAT ; NMR 83.1. ; NMR 84.1 ; NMR 85.1 ; BKR 25.3 ; LHR 72 - 74 ; YP 9
2.3.2. The complaints and appeals system is effective	UDHR 8 ; ICCPR 2.3.3. ; NMR 41.1. ; NMR 57.1. ; EASE ; YP 28 ; JVCAP
2.3.2.1. In the event of an offence committed against a prisoner, the response of the institution is effective	NMR 56 ; BKR 25 ; LHR 75 ; YP 10
2.3.2.2. Prisoners, their legal counsel or their family can file a complaint	UDHR 10 ; ICCPR 14 ; NMR 71.1 ; LHR 76 ; CRPD 13
<b>3. Eating, sleeping, showering</b>	NMR 4.1. ; NMR 42

<i>3.1. Food</i>	
3.1.1. Prisoners have access to drinking water	NMR 22 ; NMR 114 ; LHR 37
3.1.2. Prisoners have access to food	NMR 22
<i>3.2. Accomodation</i>	
3.2.1. Prisoners have sufficient living space per person	NMR 12 ; NMR 113 ; LHR 33
3.2.2. Prisoners can sleep in good conditions	NMR 21 ; NMR 33
3.2.3. The spaces are in good condition, clean and accessible	NMR 13 ; NMR 17 ; LHR 31 - 32 ; BKR 42.2. ; CRPD 9
<i>3.3. Hygiene</i>	
3.3.1. Suitable sanitation facilities allow prisoners to maintain their personal hygiene	NMR 15 ; LHR 34 ; NMR 16 ; BKR 5
3.3.2. Prisoners have access to toiletries	NMR 18 ; NMR 36
3.3.3. Prisoners have access to clothing	NMR 18 ; NMR 20 ; NMR 115 ; LHR 36
<b>4. Medical care</b>	Constitution WHO ; ICCPR 12 ; BPTP 9 ; NMR 4.1. ; NMR 24 ; NMR 42 ; DAW ; YP 17
<i>4.1. Preventive measures</i>	
4.1.1. A disease transmission risk reduction program is in place	
4.1.1.1. Prisoners have access to health awareness and information programs	WHO ; BKR 17 ; BKR 38
4.1.1.2. Screening programs make it possible to diagnose people with contagious diseases	WHO : NMR 30 ; BKR 18
4.1.1.3. Equipment and infrastructure limiting the risk of disease and infection transmission is available	WHO
4.1.1.4. Vaccination programs are organised	WHO
4.1.2. Prisoners receive a medical examination upon incarceration	NMR 30 ; BKR 6 ; BKR 8 - 9 ; LHR 50
<i>4.2. Access to care</i>	
4.2.1. Healthcare is free	NMR 24.1
4.2.2. General healthcare is provided	NMR 25.1
4.2.2.1. General care is readily available	NMR 24.1 ; NRM 25.2 ; NRM 27 ; NRM 31 ; NRM 42 ; NRM 118
4.2.2.2. Health workers are professional and independent	

4.2.2.2.1. Health workers have received adequate training and report to the public health authority	NMR 24.2
4.2.2.2.2. Health staff act fully independently and in accordance with the rules of the ethics of the medical profession	NMR 25.2 ; NMR 27.2 ; NMR 31 ; NMR 32 ; NRM 33 ; NMR 34 ; NMR 46 ; NMR 46.3 ; PME
4.2.2.3. Adequate health services are provided	
4.2.2.3.1. There is properly equipped health room in prison	NMR 24.1 ; NMR 25
4.2.2.3.2. Hospital facilities are available if needed	NMR 27
4.2.3. Access to specialised care is available	
4.2.3.1. Specialised care is readily available	NMR 24.1 ; NRM 25.2 ; NRM 78.1 ; NRM 109.3 ; NRM 27 ; NRM 31 ; NRM 42 ; NRM 118
4.2.3.2. Health workers are professional and independent	
4.2.2.2.1. Health workers have received adequate training and report to the public health authority	NMR 24.2
4.2.2.2.2. Health workers act fully independently and act in accordance with the rules of the ethics of the medical profession	NMR 25.2 ; NMR 27.2 ; NMR 31 ; NMR 32 ; NRM 33 ; NMR 34 ; NMR 46 ; NMR 46.3 ; PME
4.2.2.3. Adequate health services are provided	
4.2.3.3.1. There are spaces for specialised care in prison	NMR 24.1 ; NMR 25
4.2.3.3.2. Hospital facilities are available if needed	NMR 27
4.2.4. Prisoners with special needs have access to the necessary care	LHR 49 ; LHR 51 ; LHR 51.1 ; LHR 52 ; ICCPR 24 ; CRC 24
4.2.4.1. People starting or continuing a gender transition journey can access the necessary care	YP 9 ; YP 17
4.2.4.2. Elderly prisoners can access the necessary care	UNPOP 12 - 14 ; UNPOP 17
4.2.4.3. Children can access the necessary care	LHR 49 ; LHR 51 ; LHR 51.1 ; LHR 52 ; ICCPR 24 ; CRC 24
4.2.4.4. Women can access the necessary care	NMR 28 ; BKR 7 ; BKR 10 ; BKR 11 ; BKR 33.2 ; BKR 34 ; BKR 39 ; BKR 48.1

4.2.4.6. People with communicable diseases can access the necessary care	NMR 24.2 ; FENR ; TCP ; BKR 14 ; HIVP
4.2.4.7. People with addictions can access the necessary care	BKR 15 ; LHR 54
4.2.4.8. People with mental illnesses or psychiatric disorders can access the necessary care	NMR 109.1 ; NMR 110 ; BKR 12 ; BKR 13 ; BKR 16 ; PPPMI
4.2.4.9. People with disabilities can the access necessary care	CRPD 12 ; CRPD 17 ; CRPD 25
4.2.5. Continuity of care is ensured	
4.2.5.1. The continuity of care that started before arrival in prison is ensured	NMR 24.2
4.2.5.2. Upon arrival in prison, an individual medical file is opened	NMR 26
textbf5. Being active	RBK 4.2. ; RBK 42.1 ; RBK 42.3 ; RBK 42.4
textit5.1. Work	
5.1.1. Prisoners are not subjected to forced labour	UDHR 4 ; ICCPR 8 ; C029 2 ; C105 ; NMR 116 ; DAW 11 ; CRC 32 ; LHR 67 ; PRMW 11
5.1.1.1. Yes	
5.1.1.1.1. All prisoners who wish to can have access to a job	UDHR 23.1 ; ICESCR 6 ; BPTP 8 ; NRM 96 - 97 ; NMR 116 ; LHR 43 ; CO138 1 - 2 ; CRPD 27 ; YP 12 ; CO182
5.1.1.1.2. Prisoners who work shall receive fair remuneration and are free to use at least a portion of their earnings	ICESCR 7 ; NMR 103 ; PAP 8 ; NMR 116 ; CO100 2 ; LHR 45 ; NMR 46
5.1.1.1.3. Prisoners work in good conditions	ICESCR 7 ; LHR 44 ; PRMW 54 - 55 ; CO27 2 ; NMR 100 ; NMR 102 ; UDHR 24 ; NMR 96.2 ; NMR 102 ; NMR 14 ; NMR 101 ; PRMW 28 ; UDHR 22 ; ICESCR 9 ; NMR 101 ; PRMW 27 ; ICCPR 22 ; ICESCR 8 ; CO87 2 ; CO98 ; PRMW 26 : YP 13
5.1.1.1.4. Prisoners have access to a diversified range of skilled jobs that are not more dangerous or arduous than work outside the prison	ICCPR 10 ; NMR 98 - 99 ; LHR 43 ; LHR 45
5.1.1.2. No	
5.2. Training and education	DAW 10 ; BKR 37

5.2.1. Prisoners have access to training	ICESCR 6 ; NMR 98 ; NMR 78.1 ; NMR 92 ; LHR 42 ; LHR 45 ; BKR 37 ; PRMW 43 ; PRMW 45
5.2.2. Prisoners have access to education	UDHR 26 ; ICESCR 13 ; NMR 104 ; BKR 37 ; LHR 38-40 ; CRC 28-29 ; PRMW 30 ; PRMW 45 ; CRPD 24 ; YP 16
5.3. Cultural, sports and religious activities	BKR 42.1
5.3.1. Prisoners spend at least an hour every day outside	NMR 23 ; CRPD 30
5.3.2. Prisoners have access to cultural activities	
5.3.2.1. Prisoners have access to a library	NMR 64 ; LHR 41 ; CRDP 30
5.3.2.2. Prisoners can participate in cultural activities	UDHR 27.1 ; ICESCR 15 ; BPTP 6 ; CRC 30 - 31 ; PRMW 31 ; PRMW 43.1 ; NMR 105 ; CRDP 30 ; YP 26
5.3.3. Prisoners have access to physical and sports activities	NMR 23 ; LHR 47
5.3.4. Prisoners can practice their religion	UDHR 18 ; ICCPR 18 ; ICESCR 18 ; BPTP 3 ; NMR 2 ; NMR 65-66 ; CRC 14 ; LHR 38 ; PRMW 12 ; YP 21

Transversal : International Convention on the Elimination of All Forms of Racial Discrimination / Convention on the Elimination of All Forms of Discrimination against Women / Convention on the Rights of the Child / International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families / Convention on the Rights of Persons with Disabilities / Convention on the Rights of Persons with Disabilities / United Nations Principles for Older Persons / The Yogyakarta Principles / The Yogyakarta Principles + 10 / United Nations Rules for the Protection of Juveniles Deprived of their Liberty

## 7.4 Appendix D - Table of complementary experts' interviews (table 8)

**Table 8:** Table of complementary experts' interviews

Theme of expertise and main topic of interview	Occupation of interviewee
Expertise on prison	

Identify the specific issues related to access to psychological and psychiatric care in detention	Professional and former member member of National Prevention Mechanism
General discussion around the issues of access to healthcare in detention and analysis of the model through a perspective from West Africa	Researcher
Identification of specific issues related to COVID-19 and its influence in detention on access to healthcare analysis of the model through a perspective from the United States of America	Professional and researcher
General discussion around the issues of access to healthcare in detention and analysis of the model through the perspective of a member of a public monitoring body	Professional and member of a public monitoring body
Determine how to evaluate the quality of activities in detention based on international standards	Researcher
Analyse the concept of "forced labour" in detention and identify the dimensions of "good conditions of work"	Researcher
Identify the international standards related to unionisation in detention and social protection	Researcher
Identify influence of architecture of prison conditions	Researcher
Identify the specific issues related to the situation of pre-trial detainees	Lawyer and CSO
Identify the specific issues related to the situation of minors accompanying their parents (without being technically prisoners themselves)	Researcher and former member of public penitentiary administration
Identify the specific issues related to the situation of detained minors	CSO and expert in the monitoring of prisons
Identify the specific issues related to the situation of LGBTIQ+ prisoners	Researcher and member of a prison staff training center
Identify the specific issues related to the situation women prisoners	Researcher
Identify the specific issues related to the situation minor detained women	CSO
Identify the specific issues related to the situation of women with children in detention	Researcher
Expertise on CIs	

Discussion with the designer of an influent international CI	CSO
Discussion around the issue of the political role of CI	Researcher
Discussion around the specific issue of aggregation techniques and their influence in the design of the model	Researcher
Discussion around the specific issue of method of selection of experts	Researcher
Discussion around the availability of data on prison conditions in France	Researcher and data scientist
Discussion around the availability of data on prison conditions the region of the Council of Europe	Researcher and data scientist
Discussion around the availability of data on prison conditions in the world	Researcher
Country specific expertise	
Test-evaluation on Central Africa	Researcher and trainer for penitentiary administration professionals
Test-evaluation on Belgium	Researcher (1) and CSO members (2)
Test-evaluation on Chile	Researcher (2)
Test-evaluation on France	Researcher (2) and CSO members (2)
Test-evaluation on Switzerland	Researcher and member of a public monitoring body

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