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How Assessment Tool Design Shapes Case Managers' Behaviour in Sentence Planning

Master's Thesis

Applied Behavioural Science (227502)

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Lühikokkuvõte

Eesti vanglates koostatakse igale rohkem kui ühe aasta pikkust vangistust kandvale kinnipeetavale individuaalne täitmiskava, milles nähakse ette tema kriminogeensete riskide vähendamise abinõud ja nende kohaldamise ajagraafik (Justiitsministri määrus nr 21, 2008). Täitmiskava koostamise aluseks on kinnipeetava riskihindamise tulemused, mille koostab inspektor-kontaktisik (*edaspidi juhtumikorraldaja*). Täitmiskava kvaliteet sõltub seega olulisel määral sellest, kuidas riskihindamise vahend juhtumikorraldaja tööd toetab. Varasemate uuringute põhjal tajutakse Eesti vanglates kasutusel olevat hindamisvahendit ajamahuka ning kinnipeetavaid demotiveerivana (Rikka jt, 2023).

Magistritöö eesmärk on prototüüpida hindamisvahendit, mis toetab juhtumikorraldaja tööd ja loob eeldused individuaalse täitmiskava koostamise kvaliteedi parandamiseks. Prototüüp põhineb Norra vanglateenistuse hindamisvahendil BRIK (*Behovs-og ressurskartlegging i kriminalomsorgen*), mis on kohandatud Eesti konteksti. Analüüsi keskmes on juhtumikorraldajate käitumine neljal erineval tasandil: (1) otsustamine ja koostöö kinnipeetavaga, (2) kinnipeetava mõistmine, (3) täitmiskava koostamiseks vajaliku ja asjakohase sisendi loomine, (4) hindamisvahendi järjepidev ja kindel kasutamine. COM-B raamistikku (Michie jt, 2011) kasutatakse selgitamaks, kuidas võimekus, võimalused ja motivatsioon neid mõõtmeid kujundavad.

Nelja käitumusliku mõõtme esialgne sõnastus tugineb Rikka jt (2023) analüüsile praeguse hindamisvahendi piirangutest. Empiirilised andmed koguti 2026. aasta veebruaris hindamisvahendi prototüübi kasutamisele järgnenud poolstruktureeritud fookusgrupi intervjuu kaudu kuue juhtumikorraldajaga. Andmete analüüsimisel kasutati kuueetapilist temaatilise analüüsi raamistikku.

Tulemused näitavad, et prototüüpi tajuti struktureerituma, kasutajasõbralikuma ja karistusaja planeerimise protsessiga paremini seostuvana kui praegu kasutusel olevat hindamisvahendit. Kõigi nelja tasandi lõikes seostasid osalejad prototüüpi paranenud võimekuse, võimaluste ja motivatsiooniga. Magistritöö peamine panus seisneb käitumusliku perspektiivi sidumises riskihindamise vahendi disainiga, pakkudes konkreetset lähtekohta Eesti vanglateenistusele edasi arendamiseks. Kuna prototüüpi ei testitud kinnipeetavatega, käsitletakse kinnipeetavate kaasatust puudutavaid järeldusi juhtumikorraldajate hinnangute ja ootustena.

Märksõnad: kriminogeensete riskide hindamine, individuaalne täitmiskava, juhtumikorraldaja, COM-B, prototüüpimine, BRIK, vanglateenistus

Abstract

In Estonian prisons, every inmate serving a sentence exceeding one year receives an individual treatment plan that specifies the means for reducing their criminogenic risks and the schedule for applying these measures (Justice Minister's Regulation No. 21, 2008). The plan is grounded in a structured risk assessment conducted by the inmate's case manager. The quality of the plan therefore depends substantially on how well the assessment tool supports the case managers' work in practice. The current assessment tool is perceived as time-consuming and as having a demotivating effect on inmates (Rikka et al., 2023).

The aim of this thesis was to prototype an alternative assessment tool, adapted from the Norwegian Correctional Service's BRIK (*Behovs-og ressurskartlegging i kriminalomsorgen*) needs and resource mapping tool, designed to support case managers' behaviour and thereby create conditions for improving the quality of sentence planning. The analysis centres on case managers' behaviour across four dimensions: (1) decision-making and cooperation with inmates, (2) understanding the inmate, (3) producing relevant input for sentence planning and (4) using the tool consistently and confidently. The COM-B framework (Michie et al., 2011) is used to analyse how capability, opportunity and motivation shape these dimensions, both in relation to the limitations of the existing tool and to the improvements case managers associated with the prototype. The initial framing of the four behavioural dimensions builds on prior analysis of the current tool's limitations (Rikka et al., 2023) which the empirical interview data subsequently supported and refined.

Data were collected in February 2026 through a semi-structured focus group interview with six case managers and analysed using a six-phase thematic analysis framework. The prototype was perceived as more structured, user-friendly and connected to sentence planning than the existing tool, with participants associating the prototype with improvements in capability, opportunity and motivation across all four dimensions. This thesis integrates a behavioural perspective into risk assessment tool design, offering the Estonian Prison Service a concrete basis for further development. As the prototype was not tested with inmates, findings concerning inmate engagement are based on case managers' anticipated effects.

Keywords: criminogenic risk assessment, individual treatment plan, case manager, COM-B, prototyping, BRIK, Estonian Prison Service

Executive Summary

Time spent in prison does not automatically lead to rehabilitation. To support rehabilitation, the Estonian Prison Service prepares an individual treatment plan for each inmate serving a sentence exceeding one year. According to Justice Minister's Regulation No. 21 (2008), the plan is based on a structured risk assessment conducted by the inmate's case manager. The quality of this plan therefore depends on how well the assessment tool supports case managers' work in practice.

Previous research and the empirical findings of this thesis indicate that the current assessment tool, based on the Offender Assessment System (OASys), is perceived as time-consuming, unclear and insufficiently aligned with case managers' practical needs (Rikka et al., 2023). The Estonian Prison Service has set the development of an improved risk assessment system as a strategic priority (Estonian Prison Service, n.d.).

The aim of this thesis was to prototype an alternative assessment tool, adapted from the Norwegian BRIK (Behovs- og ressurskartlegging i kriminalomsorgen) tool, designed to support case managers' behaviour and create conditions for improving the quality of sentence planning. The initial framing of the four behavioural dimensions that structure this thesis builds on prior analysis of the current tool's limitations (Rikka et al., 2023), which the empirical interview data subsequently supported and refined: (1) decision-making and cooperation with inmates, (2) understanding of the inmate, (3) producing relevant input for sentence planning and (4) using the tool consistently and confidently. The COM-B framework (Michie et al., 2011) is used to explain how capability, opportunity and motivation shape these four dimensions, both in the limitations of the current tool and in the improvements perceived in the prototype.

Empirical data were collected in February 2026 through a semi-structured focus group interview with six case managers from one Estonian prison who interacted with the prototype of the new assessment tool. Thematic analysis (Braun & Clarke, 2006) of the interview was used to map case managers' experience of using the prototype.

The findings indicate that the prototype was perceived as more structured, easier to use and more focused on currently relevant information than the existing tool. Across all four behavioural dimensions, participants associated the prototype with improvements in capability (clearer structure, more flexible reasoning), opportunity (transparent process supporting shared decision-making, less administrative duplication) and motivation (relevant content, reduced negativity, stronger sense of professional judgement). Participants also anticipated that the prototype could support a better understanding of

inmates' needs and strengths. However, this remains hypothetical, as the tool was not tested with inmates themselves.

The main strength of this thesis is the combination of theoretical frameworks (Risk-Need-Responsivity (RNR) theory, desistance theory, COM-B) with empirical testing through prototyping. The main limitations are the small sample size, the use of a text document prototype rather than an implemented system and the absence of inmate participation. The findings should therefore be understood as case managers perceived and anticipated responses to the prototype, rather than as evidence of its effects in routine practice.

Based on the findings, the recommendation is to continue refining the prototype in a real-life setting and to ensure clear guidelines and training for case managers. This thesis offers a behaviourally grounded roadmap for the next stage of development and proposes an impact assessment framework for examining the prototype's effect in a future implementation study. The prototype is therefore best understood as a design reference for supporting sentence planning process, not as a validated replacement for OASys.

How Assessment Tool Design Shapes Case Managers' Behaviour in Sentence Planning

1. Mapping of the Problem

1.1. Target Behaviour and Its Relevance for Sentence Planning

The purpose of imprisonment is guiding the inmate toward law-abiding behaviour and protecting the legal order (Estonian Imprisonment Act § 6(1), 2000). The deprivation of liberty does not, however, achieve this rehabilitative aim on its own as time spent in prison does not automatically translate into law-abiding behaviour. To bridge this gap, § 16(1) of the same Act obliges the Prison Service to prepare a written individual treatment plan for each inmate serving a sentence exceeding one year. The plan specifies for each individual the concrete means by which the purpose set out in § 6(1) will be pursued (Madise et al., 2014). The purpose of the treatment plan is to guide the inmate toward law-abiding behaviour by mitigating criminogenic risks, supporting inmates' personal development through education and social skills and increasing the ability to function independently after release from prison (Justice Minister's Regulation No. 21, 2008, § 2(2)).

Treatment planning is the responsibility of the inmate's case manager - a prison officer who works closely with the inmate throughout their sentence and supports their progress toward a law-abiding life (Justice Minister's Regulation No. 21, 2008, § 2(1) & § 2(2)). Case manager workload cannot be captured by the number of initial assessments alone. In 2025, 638 individuals entered Viru, Tallinn and Tartu prison (Estonian Prison Service, internal dashboard, January 14, 2026[1]). Of these, 46% were sentenced to a term exceeding one year and therefore required an initial risk assessment. After excluding case managers working primarily with detainees, approximately 293 individuals were distributed across 52 case managers, corresponding to about six initial assessments per case manager per year. This figure underestimates the practical workload. However, because case managers also maintain active caseloads of inmates already serving their sentences, update assessments periodically and revise individual treatment plans.

The preparation of the individual treatment plan is based on the results of a risk assessment. Over past decades, more than 400 tools have been developed to assess the risk of violence and reoffending (Singh et al., 2014). Their widespread adoption is driven by the assumption that structured tools support more effective risk management and decision-

[1] Data reported in this section is drawn from an internal dashboard maintained by the Estonian Prison Service, which is not publicly accessible. The data was retrieved by the author on 14 January 2026.

making (Viljoen et al., 2018). Research shows that structured risk assessment instruments tend to outperform unstructured professional judgement in predicting reoffending (Andrews et al., 2006), but whether this predictive advantage translates into improved decision-making in practice depends heavily on how the assessment tools are implemented and applied (Viljoen et al., 2018).

Structured risk assessment tools span a spectrum, from purely statistical instruments that mechanically combine scored items into a risk estimate, to structured professional judgement (SPJ) tools that guide rather than replace clinical reasoning (Douglas & Kropp, 2002; Singh et al., 2014). Across this spectrum, the primary purpose of risk assessment is the prediction of future offending. In correctional practice, however, the same instruments are typically also expected to inform case management and sentence planning, even though the empirical evidence base for this secondary function is considerably thinner than for risk prediction itself. This distinction matters for the present thesis: the prototype is not evaluated as a risk predictor but as a structuring tool for the work that case managers do with inmates. The behaviour that case managers display during this work is, of course, shaped by many factors beyond any single instrument - professional experience, training, organisational culture, the working relationship with the inmate and time pressure. The assessment tool is therefore best understood as one component within a broader behavioural system, and it is this component that the present thesis isolates for analysis.

This thesis focuses on the intersection between risk assessment tools and case manager behaviour. In the context of this thesis, the practical value of the assessment tool is examined through the quality of the sentence planning work it helps case managers to structure. For such tools to be effective, they thus must be not only unbiased and consistently applied (Larsen et al., 2024) but also able to facilitate specific behaviour by the case managers. These behaviours are the object of analysis in this thesis. Rather than evaluating the assessment tool only as a technical part of case managers work, the focus is on how the assessment tool shapes what case managers do: how they reason about the inmate, how they cooperate with the inmate during the process and how they translate assessment outcomes into an individual treatment plan.

The initial framing of these four behavioural dimensions builds on prior analysis of the current tool's limitations (Rikka et al., 2023), which the empirical interview data subsequently supported and refined. The dimensions are presented here at the start of the thesis because they structure the entire argument that follows. These dimensions are used

as analytical categories throughout the thesis; in the empirical findings, they are examined through case managers' perceptions of the prototype. A well-functioning assessment process should support case managers in:

1. **Decision-making and cooperation with inmates** – reaching defensible, reasoned judgement about inmates' risk and needs in a process that is transparent enough to allow shared decision-making with the inmate.
2. **Understanding of the inmate** – building a balanced picture that integrates risks, strengths, resources and developmental potential, rather than only criminogenic risk factors.
3. **Producing relevant input for sentence planning** – producing assessment outputs that can be translated into individualised treatment plans.
4. **Using the tool consistently and confidently –** applying the tool with consistency across cases and with confidence rooted in clear comprehension of its logic.

To understand factors influencing the quality of the sentence planning process, it is necessary to analyse how case managers use the assessment tool in practice. Attention must be given to how this use affects consistency and needs-based application of assessment outcomes.

1.2. The Current Assessment Tool and Its Limitations

In the Estonian Prison Service, a structured risk assessment tool based on the OASys has been used since 2007 (Grünberg, 2013). OASys is a fourth-generation risk assessment instrument (Andrews et al., 2006) originally developed in England and Wales that combines static and dynamic risk factors (Moore, 2015). Fourth-generation tools differ from earlier generations in that they extend beyond static scoring of recidivism risk to also identify dynamic criminogenic needs and to integrate elements of case management, including intervention planning, implementation and review (Andrews et al., 2006). The OASys structure reflects this dual ambition: it produces both a recidivism risk score and a structured sentence plan output, intended to translate identified needs into concrete intervention planning (Grünberg, 2013).

However, recent empirical findings indicate several limitations with how the OASys-based tool functions in Estonian practice. According to Rikka et al. (2023), case managers experience the tool as outdated, time-consuming and difficult to use due to unclear guidelines and technical issues. The tool produces large amounts of information,

much of it relating to distant past behaviour that may not be relevant for current sentence planning. This is, in part, a reflection of the tool's primary stated purpose: OASys was designed to predict the risk of offending and historical behaviour is a robust statistical predictor in that prediction task, even when its sentence-planning value at any given moment is limited (Andrews et al., 2006). Rikka et al. (2023) therefore do not argue that the tool is bad at predicting risk. Their point is that the same information is also used for sentence planning, even though it may not always be relevant for that purpose. The assessment process may also have a demotivating effect on inmates, as it primarily emphasises negative aspects of their lives while the calculated risk level often remains relatively stable over time. Rikka et al. (2023) report the negative framing and its perceived demotivating effect as observations of case managers. This thesis interprets the combination of negative framing and relatively stable risk levels as potentially reducing engagement and limiting the tool's usefulness for supporting behaviour change.

The effectiveness of risk assessment tools depends not only on their predictive validity but also on the quality of their implementation (Sarver et al., 2015). Inconsistent interpretation or insufficient understanding of the tool may reduce the accuracy of assessment outcomes. Such weaknesses may lead to inappropriate interventions, thereby reducing the effectiveness of rehabilitation efforts and increasing the risk of recidivism. The identified limitations therefore do not stand alone. They affect each of the four dimensions of case managers' behaviour outlined above.

1.3. A Behavioural Framework: COM-B

To better understand case managers' behaviour when using the assessment tool, this study applies the COM-B framework (Michie et al., 2011). The framework explains behaviour as the result of the interaction between three components: capability, opportunity and motivation. These definitions are used consistently throughout this thesis to assign each observed limitation to a specific COM-B component. The COM-B framework was selected because it offers a concise and behaviour-focused approach that fits the analytical task of this thesis: identifying which features of an assessment tool support or hinder case managers behaviour. Its three components cover the range of barriers described in Rikka et al. (2023) without forcing the analysis into a tool-specific construct. COM-B is not treated here as a model empirically tested in the Estonian prison context, but as an analytical framework for organising barriers and facilitators reported by managers.

Capability refers to a case manager's psychological and physical ability to perform the assessment behaviour, including the knowledge and skills the work demands and the

cognitive load it imposes. A capability barrier is therefore one that requires specific knowledge, skills or comprehension to overcome, meaning that it affects different case managers differently depending on their training and experience. **Opportunity** refers to all external factors that make the behaviour possible or easier, including the physical environment (time, technology, workload) and the social environment (professional norms, organisational structures, interactions with inmates). An opportunity barrier is therefore one that tends to affect case managers through shared contextual conditions, rather than through differences in individual knowledge or skills. **Motivation** refers to the processes that direct and energise behaviour, including both reflective decisions and habitual or emotional responses. A motivation barrier is therefore one that affects a case manager's internal drive or willingness to engage with the assessment work, whether consciously or automatically.

These three components are connected. Capability and opportunity shape motivation, while repeated use of an assessment tool can, over time, strengthen or weaken capability, motivation and perceived opportunities. In the case management context, opportunity is shaped not only by the working environment but also by the interaction with the inmate. A tool that supports a transparent, collaborative encounter creates different opportunities than one that does not. Behaviour is therefore not static but develops through the interaction between capability, opportunity and motivation.

The COM-B framework provides a structured way to identify factors that support or hinder case managers' use of the assessment tool in desirable ways. Previous findings (Rikka et al., 2023) indicate that barriers to effective tool use exist across all three components. This suggests that limitations in case managers' assessment practices cannot be explained by a single factor, but rather by the interaction of multiple behavioural factors.

Table 1 organises the limitations of the current risk assessment tool along the four behavioural dimensions identified in Section 1.1 and COM-B components. The list of limitations is based on Rikka et al. (2023) while their assignment to behavioural dimensions and COM-B components is the author's interpretation. Empty cells (marked "-") indicate aspects that Rikka et al. did not directly address. These gaps are not weaknesses in the framework but informative blank spaces. They map exactly the question that the empirical part of this thesis (Section 3) is positioned to answer.

Table 1

COM-B Analysis of Current Assessment Tool's Limitations Across Four Dimensions of Case Managers' Behaviour (limitations based on Rikka et al., 2023).

Dimension of case managers behaviour	Capability barriers	Opportunity barriers	Motivation barriers
1. Decision-making and cooperation with inmates	Unclear guidelines reduce the ability to apply the tool consistently across cases	Time-consuming process leaves less time for considered judgement and dialogue with the inmate	Tool's emphasis on negative aspects of inmates' lives is reported as demotivating for inmates, which may in turn weaken the cooperative dimension
2. Understanding of the inmate	Large amounts of information, much of it about distant past behaviour, dilute attention to the inmate's current situation	-	-
3. Producing relevant input for sentence planning	Distant past content limits the relevance of assessment outputs for current sentence planning	-	Calculated risk levels remain relatively stable over time, providing limited dynamic input for plan revision
4. Using the tool consistently and confidently	Tool is reported as difficult to use; unclear guidelines reduce comprehension	Technical issues impede smooth use of the tool	Tool is perceived as outdated, which may reduce engagement

Applying the COM-B framework to the current tool therefore shifts the focus from the assessment tool as a purely technical instrument to the behavioural context in which it is used. The problem this thesis addresses is therefore not only the design of the tool itself, but also the way in which it is perceived to influence case managers' behaviour in their work with inmates.

1.4. Implication: Why Prototyping

Improving the quality of sentence planning therefore requires more than technical modification of the assessment tool. It requires understanding how the tool interacts with case managers' capability, opportunity and motivation along each of the four dimensions identified. It also requires understanding how these components can be supported through changes in the tool's structure, content and use.

In this context, prototyping an improved assessment method provides a practical approach to addressing these behavioural barriers. Prototyping allows case managers to engage with concrete changes in the structure and content of the tool in a realistic work-related context, to articulate how they anticipate these changes would shape their behaviour with inmates and whether these changes support more consistent, balanced and need-based use of the assessment tool. Chapter 2 details the design of the prototype of a

new risk assessment tool and the theoretical and empirical reference points on which it is built.

2. Solution Mapping

The previous section identified four behavioural dimensions of case management practice and used COM-B to diagnose where the current risk assessment tool falls short on each. This section turns to the solution side. It situates a prototype of a new assessment tool within the broader theoretical landscape of risk assessment (Section 2.1), explains the choice of the Norwegian BRIK tool as the adaptation reference (Section 2.2) and states the research objective and questions that the prototype is designed to address (Section 2.3).

2.1. Solution Context

Offender risk assessment tools are mainly informed by three theoretical approaches: the risk-need-responsivity (RNR) model, structured professional judgement (SPJ) and desistance theory. The RNR model focuses on matching the intensity of intervention to the individual's assessed level of risk, targeting criminogenic needs and adapting interventions to the person's abilities, learning style and other relevant characteristics (Bonta & Andrews, 2017). SPJ approaches add a structured form of professional reasoning, in which empirical risk factors are considered alongside case-specific judgement and risk management need (Douglas & Kropp, 2002). Desistance theory places greater emphasis on the long-term process of moving away from crime, highlighting the importance of motivation, supportive relationships, personal strength, individual agency and opportunities for meaningful change (Farrall & Calverley, 2006; Maruna & LeBel, 2003; McNeill, 2006; McNeill & Weaver, 2010). Taken together, these approaches suggest that assessment tools should do more than predict risk: they should also help practitioners understand individual needs, support professional judgement and create conditions for sustained behavioural change.

For the purposes of the present thesis, the most relevant theoretical foundation is the integration of RNR principles with desistance theory. RNR theory emphasises the identification of criminogenic risks and needs, providing a structured basis for targeting interventions according to an individual's assessed level of risk (Andrews & Bonta, 2010). In parallel, desistance theory highlights individual agency, strengths, social relationships and the process of behavioural change (McNeill, 2006; Maruna, 2001). While RNR focuses primarily on risk factors, desistance theory directs attention to personal resources, motivation and opportunities that support disengagement from crime. Together, these

perspectives reflect a broader understanding of rehabilitation, where both risk reduction and the development of individual capacities are considered essential.

The evolution of assessment practice reflects growing recognition that effective assessment must go beyond static risk prediction (Bonta & Andrews, 2007). Contemporary approaches increasingly integrate dynamic factors, individual needs and strengths-based elements, acknowledging that risk assessment should not only classify individuals but also actively support rehabilitation planning (Hoge, 2013). More recent systematic reviews continue this trajectory. Viljoen et al. (2018) reviewed 73 studies of whether risk assessment tools help manage and reduce violence and reoffending and concluded that tools may be an important starting point but do not by themselves guarantee effective treatment or risk management, with professionals not always acting on the tools' output. Larsen et al. (2024), in their study of the LS/RNR instrument among Danish prisoners, further show substantial differences in recidivism outcomes between subgroups defined by age and minority background, even when those subgroups were placed within the same risk level. Importantly, this variation occurred despite the instrument performing as a medium to strong predictor under standard correlation. This reinforces the central argument of the present thesis: the design of an assessment tool should be assessed not only by its predictive properties, but also by how it supports or constrains the behaviour of the professionals who use it. Integrating RNR principles with desistance theory provides a comprehensive foundation for selecting and developing an assessment tool. Such an approach enables case managers to identify criminogenic risks while also recognising the capacities, resources, and protective factors that may support sustainable desistance from crime.

These theoretical perspectives also map onto the four behavioural dimensions of this thesis: RNR supports the production of relevant input for sentence planning, while desistance theory strengthens the focus on cooperation, inmate understanding and engagement.

A comparative analysis of risk assessment tools used across seven countries (Floren-Anslan, 2023) found that most countries rely on assessment tools based on RNR theory or are in the process of developing new tools that also consider individuals' strengths and resources. In addition, the analysis revealed that the Norwegian Correctional Service has used the mapping tool BRIK since 2015. The tool is grounded in both the RNR and desistance theory and includes elements that are compatible with restorative justice

principles. It assesses not only risk factors associated with reoffending but also protective factors that may reduce the likelihood of reoffending.

BRIK was selected as a design reference, not as a validated replacement for OASys. It was chosen because it combines attention to criminogenic risks and needs with strengths, social context, individual agency and collaboration with inmates. This made it suitable for examining how assessment tool design may support sentence planning rather than only risk classification. The prototype was therefore used to examine how such design features are perceived to support case managers capability, opportunity and motivation across the four behavioural dimensions. Testing it as a low-cost text document prototype allowed case managers to engage with the proposed structure and content before any technical implementation.

2.2. Adapting BRIK to the Estonian Context

BRIK (*Behovs-og ressurskartlegging i kriminalomsorgen* – needs and resource mapping in the correctional service) is an electronic mapping tool grounded in both the RNR and desistance theory, with elements of restorative justice (Kilaas, 2023). Three features of BRIK are central to its relevance for this thesis:

1. Integrated risk and protective factors – BRIK assesses not only risk factors associated with reoffending but also protective factors and personal resources (skills, competencies, social connections) that may reduce reoffending and support change.

2. Self-assessment by the inmate – alongside the case managers assessment, the inmate completes a self-assessment component reflecting their own perspective on their situation. This creates two perspectives that can be compared and discussed.

3. Collaborative mapping process – the mapping is carried out together with the inmate, with the explicit aim of strengthening engagement and the working relationship between case manager and inmate (Ploeg, 2022).

Therefore, BRIK supports flexible decision making and cooperation through its collaborative format, broadens understanding of the inmate through strengths-based and self-assessment elements, and strengthens relevance for sentence planning by anchoring assessment in current resources.

This thesis adapts BRIK to the Estonian prison context as a text document prototype. The aim of the adaptation is not to produce a finished system but to make the structure and logic of a BRIK based tool concrete enough for case managers to engage with it, react to it and provide feedback. Given the prototyping design, this study examines

how case managers perceive that such an assessment tool would shape their behaviour, rather than observing its effects in practice. Three key adaptation steps were taken by the author as part of this thesis, in the period preceding the prototyping session in February 2026: (a) translation and contextual adjustment of items to the Estonian prison setting, (b) preparation of a text document suitable for use in a prototype session without requiring software development and (c) preparation of supporting materials for case managers explaining the tool's purpose, theoretical background and completion logic.

The prototype used in the session consisted of three linked materials: an introductory presentation for case managers, a case manager handbook and an assessment form. The introductory presentation was used to explain the purpose of the prototype, its theoretical basis and its role in sentence planning before participants worked with the simulated case. The handbook provided more detailed guidance on the logic of BRIK, including its links to desistance theory, restorative justice and motivational interviewing and explained how assessment should be completed. The assessment form was the practical tool used in the prototyping exercise.

The assessment form was organised into 15 thematic assessment sections: general information, living conditions, financial situation, education/work/employment, social network, physical health, mental health, alcohol use, drug and medication use, violent behaviour, addiction-related problems, participation in social programmes, reparation of harm, victimisation by aggression and/or violence and self-assessment. Across these sections, the form combined closed response options, free-text justification fields, the inmate's own perspective, the case manager's assessment of possible problems, space for objections and planned interventions during the sentence. The prototyping methodology is described in Section 3.1.2.

2.3. Research Objectives and Questions

The objective of this study is to prototype an assessment tool aimed at supporting case managers' use of assessment information in sentence planning and to examine how case managers perceive its potential contribution to the quality of sentence planning.

To understand how case managers perceive the prototype in relation to this objective, the thesis is guided by four research questions, each corresponding to one of the four behavioural dimensions:

1) How do case managers perceive the prototype's role in supporting their decision-making and potential cooperation with inmates in the sentence planning process?

2) How do case managers perceive the prototype as affecting their understanding of an inmate's situation, background and developmental potential?

3) To what extent do case managers perceive the prototype as providing sufficient and relevant input for sentence planning?

4) How do case managers perceive the clarity, understandability and usability of the prototype in the context of sentence planning?

Given the prototyping design used here (a simulated case rather than interaction with a real inmate), these four questions are answered from the perspective of case managers rather than through direct observation of interaction between case managers and inmates. The findings therefore describe case managers experience of using the prototype and their reasoned anticipation of how it would shape their behaviour with inmates. Direct, observational answers to the first three questions would require an implementation study with inmates, which is outlined in Chapter 4.

3. Qualitative Study

3.1. Methods

3.1.1. Research Design

This thesis includes a qualitative phase that was conducted with a sample of case managers who use a structured assessment tool as part of their work with inmates. The aim of this phase was to identify the factors that shape how case managers use an assessment tool. Specifically, how the design and content of the tool support or constrain the four behavioural dimensions of case management practice introduced in Section 1.1. These factors were explored through a semi-structured focus group interview, conducted following a prototyping session with the same participants. Qualitative research helps to understand opinions and experiences through collecting and analysing non-numerical data, which is useful for gaining deeper insight into a problem or generating new ideas for further research (Braun & Clarke, 2013). The focus group interview format was selected to enable interaction between participants, allowing them to reflect on the use of the prototype, compare experiences and build on each other's perspectives. This approach supported the identification of both shared understandings and differing views regarding the usability and impact of the mapping tool.

3.1.2. Prototyping Approach

In this thesis, prototyping was used as a research approach and practical intervention to explore whether the mapping tool can be integrated into case managers' work and whether it is useful in practice. A prototype can be understood as an early version of a concept that is not evaluated based on its completeness, but rather on its potential to address a specific problem (Wensveen & Matthews, 2015).

Prototypes and prototyping offer several benefits, including facilitating communication, supporting learning, enabling feedback, informing decision-making and contributing to improved design outcomes (Coutts et al., 2019). Prototyping is recognised as an important part of solution development, as it allows ideas to be tested and improved through user feedback (Thomke & Bell, 2001).

In contrast to purely theoretical evaluation, prototyping enables the observation of users' interaction with a concrete version of the tool, thereby providing insight into perceived usability and anticipated behavioural responses in a realistic task context. This is particularly relevant in this thesis, where the aim is to understand how the tool shapes case managers' behaviour. From a behavioural perspective, the prototype approach also supports the analysis of capability, opportunity and motivation (Michie et al., 2011). The structured use of the prototype enables case managers to apply their knowledge and skills, simulates a realistic work context and may influence engagement and perceived relevance of the tool.

3.1.3. Study Procedure

The empirical part of the thesis included a single prototyping session with six case managers, structured as follows. At the beginning of the prototype session, participants were informed about the purpose of the study and provided written informed consent. They were instructed to focus on evaluating whether the tool supports their work and the process of sentence planning, rather than aspects such as speed of completion or wording precision.

Following the introduction, participants were given an overview of the theoretical background of the tool, explaining the purpose of the prototype and its role in case management. Participants were introduced to the handbook and assessment form and were familiarised with the structure and questions of the form step by step.

This was followed by a simulation exercise based on a realistic client profile. During the simulation, participants used the assessment form and the accompanying handbook in a controlled setting without interruptions or additional complexities. No actual

inmates participated in the testing. Instead, the client profile consisted of a written case description that participants worked through independently. The implications of this design choice for the types of conclusions that can be drawn from the findings are discussed in the limitations section of the study (Section 3.5). This approach ensured that differences in responses were related to the tool itself rather than external factors.

After completing the task, participants took part in semi-structured focus group interview, where they reflected on their experience of using the tool. The prototyping session thus functioned as a preparatory stage for data collection, ensuring that participants had direct experience with the tool before evaluating its usability and impact on sentence planning process.

3.1.4. Data Collection

The interview questions were designed to cover key factors of case managers behaviour. Specifically, the questions addressed the clarity and usability of the mapping tool, the ease or difficulty of its application and the extent to which it supports or constrains professional judgement. The questions also examined the extent to which case managers rely on their professional experience in comparison to the tool, as well as the perceived impact of the mapping tool on sentence planning quality and perceived implications for resocialisation work. The full interview plan is presented in Annex 1.

The focus group discussion was audio-recorded with participants' prior consent and transcribed for analysis. All data were processed anonymously to ensure confidentiality throughout the research process.

3.1.5. Participants

The final sample consisted of six case managers from the Estonian Prison Service. The sample was selected to include individuals from different age groups and with different levels of work experience, to capture a range of perspectives related to the use of the assessment tool.

Although the sample size is relatively small, it is appropriate for qualitative research, where the aim is to gain in-depth understanding of participants experiences rather than to achieve statistical representativeness. The selected sample represents approximately 9.5% of the total number of filled case manager positions in Estonian prisons. This proportion should not be interpreted as statistical representativeness, but it provides a meaningful basis for identifying issues that can be examined in later implementation research.

3.1.6. Ethical Considerations

The study did not involve inmates, did not collect inmates' personal data and did not include any medical, psychological or physical intervention. However, participants discussed professional practices in a small organisational field, which meant that confidentiality and anonymisations were important. No directly identifying information about participants was included in the analysis or reporting. Based on these factors, the research ethics committee approval was not required for this study.

The research was conducted in accordance with ethical principles of scientific research and data protection requirements, ensuring the protection of the participants' rights, privacy and the secure and responsible handling of collected data. Participation in the study was voluntary, and participants had the right to withdraw at any time without providing a reason. Prior to the start of the prototyping session, all participants provided written informed consent (Annex 2), confirming that they had been informed about the purpose of the study, the principle of data collection and processing and the voluntary nature of the participation.

3.1.7. Researcher Position

In qualitative research the researcher's position is part of the data-generation process and should therefore be made explicit (Braun & Clarke, 2006). The author of this thesis works in Prison Service College in Estonian Academy of Security Sciences and was responsible for the adaptation of BRIK to the Estonian context, the design of the prototyping session and the facilitation of the focus group interview. Participants were aware of the author's involvement in the development of the prototype prior to the session. Some of the participating case managers were known to the author through prior professional contact, although none stood in a supervisory or evaluative relationship to the author. This dual role of developer and interviewer may have influenced the data in two directions. Participants may have been more candid because they trusted the author and saw the session as a genuine opportunity to shape a tool they would later use or may have softened criticism to support a colleague's work. To mitigate the latter, the introduction to the prototyping session emphasised that critical feedback was the primary aim and that no response would advantage or disadvantage the participant. Questions were phrased openly and the recording was reviewed alongside the transcript to ensure that critical points were not lost in summarising. The implications of this researcher position for the interpretation of findings are revisited in the limitations of the study (Section 3.5).

3.1.8 Data Analysis

The interview was audio-recorded and transcribed using the open-source platform tekstiks.ee, developed by the Institute of Cybernetics at Tallinn University of Technology (Olev & Alumäe, 2024). The transcription was reviewed alongside the audio recording to ensure accuracy.

The data were analysed using Braun and Clarke's six-phase thematic analysis framework (Braun & Clarke, 2006). The transcription was then read multiple times to achieve familiarity with the data and to generate initial observations. The analysis was hybrid in structure. Initial coding was inductive, during which segments of the data were assigned codes reflecting relevant aspects of participants' experience and perceptions. Additional codes were created as new themes emerged. The later organisation of codes was deductive, using the four behavioural dimensions and COM-B components as analytical categories. The four behavioural dimensions that organise the findings did not emerge from the interview data alone – their initial framing was built on prior analysis of the current tool's limitations (Rikka et al., 2023) and the empirical coding was used to examine and refine this framing: (1) decision-making and cooperation with inmates, (2) understanding of the inmate, (3) producing relevant input for sentence planning and (4) using the tool consistently and confidently. The themes were then analysed and interpreted in relation to the study's objective, focusing on how the assessment tool was perceived to influence case managers' behaviour in sentence planning. The focus group setting also enabled the identification of consensus and disagreements in participants' views, providing deeper insight into the context influencing the use of the mapping tool. Throughout the analysis, attention was paid to both explicit statements and underlying meanings, as well as to how participants justified their evaluations of the tool.

The full thematic code tree is presented as Table 2. Codes were derived inductively from the data and then organised analytically along two central points: the four behavioural dimensions of case manager practice introduced in Section 1.1 and the COM-B components of capability, opportunity and motivation. This two-dimensional organisation mirrors the structure of Table 1 and Table 3, making the analytical thread of the thesis visible from coding through to interpretation.

Table 2

Thematic Code Tree of Mapping Tool Usage, Organised by Behavioural Dimensions and COM-B Component

Category	COM-B	Codes	
Category 1:			
Decision-making and cooperation	Capability	1.1	Reasoned judgement vs forced scoring
	Capability	1.2	Free-text justification at the end of each topic
	Opportunity	1.3	Joint completion with inmate
	Opportunity	1.4	Process visibility/transparency to the inmate
	Motivation	1.5	Trust-building through shared work
Category 2:			
Understanding of the inmate	Capability	2.1	Strengths and resources made visible alongside risks
	Capability	2.2	Self-assessment as triangulation against case manager view
	Opportunity	2.3	Structural inclusion of the inmate's own voice
	Motivation	2.4	Shift from deficit-only to balanced framing
Category 3: Producing relevant input for sentence planning	Capability	3.1	Focus on currently relevant information vs distant past
	Capability	3.2	Direct mapping from assessment to specific interventions
	Opportunity	3.3	Integration of assessment and planning into one workflow
	Opportunity	3.4	Reduced external information gathering burden
	Motivation	3.5	Goal-setting that gives inmates ownership of the individual treatment plan
Category 4:			
Using the tool consistently and confidently	Capability	4.1	Simpler structure, lower cognitive load
	Capability	4.2	Barriers: translation issues, Norwegian-specific items
	Opportunity	4.3	Reduced time burden; fewer formal complaints/court appeals
	Motivation	4.4	Reduced stress from rigid scoring; more positive user experience

3.2. Research Findings

The findings are organised around the four research questions stated in Section 2.3, each corresponding to one of the four behavioural dimensions that emerged from the analysis described above. Within each subsection, descriptive findings are presented first, supported by participants' direct quotations. Behavioural interpretation in COM-B terms is summarised at the end of each subsection.

3.2.1. Perceived Influence on Decision-making and Cooperation with Inmates

The findings indicate that case managers perceived the BRIK prototype as potentially restructuring decision-making by shifting attention from extensive historical data toward factors that are directly relevant for current sentence planning process. Participants consistently emphasised that the tool supports a clearer and more purposeful assessment logic. As one participant explained, *"The goal is to plan the inmate's sentence, not to go through their entire life history… but to focus on what has led to current offence and how it can be mitigated"* (Participant 1). Similarly, the reduced emphasis on distant past behaviour was perceived as beneficial: *"there is no need to dig up all those old offences… the focus is rather on one issue"* (Participant 1). This shift may enable more efficient and coherent decision-making, as case managers can concentrate on relevant needs and risk factors rather than filtering large amounts of background information.

At the same time, participants strongly criticised the strictness of the current system, particularly its dependence on fixed scoring categories. One participant described this limitation by noting that *"sometimes… it is 1.5. But I still must choose whether it is one or two"* (Participant 4), while another added that *"some elements fit one category, and some fit another and then you sit there thinking which one it really is"* (Participant 1). In contrast, the prototype was perceived as allowing more flexible reasoning and explanation, which was seen as supporting professional judgement: *"This version allows more flexibility and enables us to explain our reasoning rather than fit it into predefined scores"* (Participant 1).

In terms of cooperation, the prototype was perceived as enabling a more transparent and shared process. The current system was described as unclear, where *"the process is quite hidden, which does not support trust"* (Participant 2). Participants emphasised that completing the assessment together with the inmate could strengthen the relationship: *"it would create more trustful relationships, especially if we could do it together with him"* (Participant 1). Participants also noted that the tool could encourage inmates to engage more actively, as *"This questionnaire would actually give the inmate the opportunity to look into themselves"* (Participant 3) and *"maybe it would make them take more responsibility for their actions"* (Participant 5). Concerns were raised about potential manipulation (meaning inmates presenting themselves favourably). This was not viewed as a major limitation. Participants emphasised the importance of combining self-assessment with professional judgement and existing information, for example by *"comparing what they say with what is already known"* (Participant 1).

A further consequence of the current assessment system complexity surfaced in participants' descriptions of administrative burden. Because case managers cannot disclose assessment content during the conversation, inmates discover the contents only when receiving the final sentence plan, which generates written objections and, in some cases, requests to the court. As one participant explained, "*you cannot disclose the methodology and all that, but if we actually did this together, the question of where the information came from would not arise…that part would simply fall away*" (Participant 5). Another noted that with joint completion, "*perhaps the recourse to court would also fall away altogether*" (Participant 6). Participants therefore associated the prototype's transparent format not only with stronger trust but also with a potential reduction in this downstream administrative work.

The COM-B interpretation that follows refers to the behavioural shifts case managers anticipated when working with the prototype, rather than to behaviour observed through direct interaction with actual inmates. This also applies to the three subsequent dimensions. On this dimension, the prototype appears to address barriers in all three COM-B components. Case managers perceived the prototype as expanding capability through the option of articulated, free-text reasoning rather than forced 1/2 scoring. Opportunity was perceived to expand in two related ways: first, the process becomes visible and shareable with the inmate during completion; second, the downstream administrative friction generated by lack of clarity may be reduced. Participants perceived that joint completion could reduce some downstream objections, appeals or information requests because inmates would better understand how assessment information was generated. Motivation was anticipated to be supported as collaborative completion replaces checkbox-style work with more meaningful, trust-building exchange.

3.2.2. Perceived Influence on Understanding of the Inmate

Case managers perceived the prototype as supporting a more balanced and dynamic understanding of the inmate. Participants described a clear shift away from a primarily problem-oriented approach toward one that also recognises strengths and resources. As one participant stated, *"it focuses more on the person's resources and positive aspects than on reproaching them for what they did"* (Participant 5). Participants also noted that this orientation aligns with what inmates themselves have asked for. Participants reported that inmates had repeatedly questioned (according to case managers) "*why you only ever bring up the negative things*" (Participant 4) and have explicitly asked case managers to notice positive change during the sentence (Participant 6). The strengths-based framing therefore

appears to address a need reported by case managers and attributed by them to inmates, allowing a more comprehensive understanding of the inmate's situation that includes both risk and capacities for change.

A key feature supporting this shift is the inclusion of self-assessment. Participants highlighted that this enables comparison between the inmate's own perspective and professional assessment, which can reveal important inconsistencies. One participant noted that *"it would give the inmate more opportunity to analyse themselves. Not so that we analyse their behaviour for them"* (Participant 2). Such comparisons were seen as particularly useful for identifying denial or lack of insight, as illustrated by the example in which an inmate denies an alcohol problem despite evidence to the contrary (Participant 1).

The findings also indicate that understanding is not static but develops over time. Participants emphasised that certain strengths and resources may only become visible through ongoing interaction, noting that *"resources may not come out at the very first meeting… later we see their behaviour"* (Participant 4). This highlights the importance of viewing assessment as a continuous process rather than a one-time classification.

On this dimension, case managers perceived that the prototype would broaden capability by widening the lens beyond past deficits and structuring strength-based observation alongside risk identification. Opportunity was perceived to expand through the self-assessment component, which brings the inmate's own perspective in for triangulation rather than treating it as something to be interpreted by the case manager alone. Motivation was anticipated to be supported as case managers gain a more balanced and developmental picture of the people they work with – one that aligns with what inmates have themselves asked (according to case managers) to see acknowledged.

3.2.3. Perceived Support for Producing Relevant Input for Sentence Planning

The findings suggest that the prototype provides more relevant and practically useful input for sentence planning than the current system. Participants consistently emphasised that the current assessment process produces excessive information that is not directly applicable to planning interventions. As one participant stated, *"a large part… focuses on analysing old crimes, which in reality does not influence the current sentence plan"* (Participant 5), while another questioned the relevance of distant offences, noting that *"it does not give me anything for sentence planning"* (Participant 1).

A specific source of irrelevant input emerged in participants' descriptions of upstream background information gathering. The current assessment tool requires querying multiple external databases, much of which adds little to the current sentence planning

process. As one participant put it "*if I know he has, say, an alcohol or drug problem and needs a social programme, what does it add to me that he committed some offence in Germany ten years ago, or that he finished four grades at one school and the rest at another?*" (Participant 1). Producing extensive reports built on this material was also experienced as having limited downstream payoff, since calculated risk levels often remain stable across reassessments (Participants 4,6). The prototype's narrower scope was therefore associated not only with shorter completion time but also with reduced upstream information-gathering work.

In contrast, the prototype prioritises actionable information, with participants highlighting that *"the main emphasis is on concrete things, not on some long history"* (Participant 6). This may improve the alignment between assessment and intervention planning, enabling case managers to directly link identified problems to specific actions: *"we can explain immediately why… the alcohol problem needs to be included and why the interventions are planned in that way"* (Participant 4).

The integration of assessment and planning was also seen as reducing inefficiencies and improving the suitability of interventions. By discussing interventions during the assessment process, case managers can ensure that planned activities are appropriate and realistic. Some limitations were also identified, including the need for more detailed information in certain areas and the continued importance of background data for verification: *"you still need some background information to compare what they say with what is known"* (Participant 1).

On this dimension, case managers perceived that the prototype would expand capability by narrowing the scope to currently relevant material and providing a more direct path from assessment items to specific interventions. Opportunity was perceived to expand in two related ways: assessment and planning are integrated into a single workflow rather than separated steps and the upstream burden of background information gathering is reduced. Motivation was anticipated to be supported as the work case managers invest in is visibly tied to the eventual individual treatment plan and goal setting becomes a shared rather than imposed exercise.

3.2.4. Perceived Clarity, Confidence and Conditions for Consistent Use

After working through one simulated case, participants generally perceived the prototype as clear, logical and easy to use. The simplified structure and concise format were highlighted as key strengths, with one participant noting that *"the questionnaire was simple, understandable and it was good to fill in"* (Participant 4), and another adding that

"the questions were logical and without additional information I could answer them" (Participant 5). This reduced complexity lowers cognitive load and supports more efficient use of the tool. Consistency in the technical sense (meaning similar use of the tool across cases over time) cannot be measured in a single prototyping session. In this section, the dimension is therefore treated as case managers anticipated confidence in applying the tool consistently, based on their experience of working through one simulated case. Empirical assessment of actual consistency requires the pilot study proposed in Chapter 4.

At the same time, several usability challenges were identified. Translation produced questions that "felt strange because they are direct translations" (Participant 2) and several items reflected institutional context unfamiliar in Estonia. Questions about participation in voluntary organisations of a kind not common in Estonian society, items presupposing the relevance of religious practice and a question about access to medical care that participants viewed as redundant given that healthcare is routinely available within Estonian prisons (Participant 3). Structural inconsistencies were also reported. The separation of alcohol, drug and addiction-related items into parallel sections that participants felt should be consolidated (Participants 1, 6) and a question that appeared to repeat in different wording within the aggression section (Participant 3).

Despite these issues, the prototype was still perceived as more flexible and less stressful than the current system. Participants appreciated the reduced reliance on strict scoring and the ability to express their reasoning more freely. This flexibility was associated with a more positive user experience and greater alignment with professional practice.

On this dimension, case managers perceived that the prototype would expand capability through its simpler structure and more accessible question format, although translation and a small number of items reflecting Norwegian rather than Estonian institutional context create residual capability barriers that further iterations will need to address. Opportunity was perceived to improve through reduced time burden and by the option of consolidating overlapping items, such as the alcohol/drug/addiction sections. Motivation was anticipated to benefit from reduced stress associated with rigid scoring and from the more positive overall user experience associated with flexible reasoning.

3.3. Synthesis with Existing Literature

Read across the four behavioural dimensions, the empirical findings tell a consistent story: case managers perceived the prototype as having the potential to alleviate barriers in all three COM-B components, although in different ways depending on the

dimension in question. Capability barriers such as irrelevant data and unclear guidelines are addressed primarily through changes in the structure and content of the tool. Opportunity barriers are addressed mainly through changes in how the tool is used, especially the inclusion of a self-assessment component and a collaborative format that brings the inmate's perspective into the assessment. Motivation barriers are addressed more indirectly, because of improvements in capability and opportunity: a tool that is clearer, more relevant and used collaboratively is also more meaningful and motivating to engage with.

To make this synthesis explicit and to clarify the contribution of this thesis to the existing literature, Table 3 compares the empirical findings with what was already known. The left column presents the limitations identified by Rikka et al. (2023), while the right column shows what this thesis confirms, refines or newly identifies. In this way, the empirical findings help fill the gaps identified in Table 1.

Table 3

Synthesis of Limitations of the Current Tool from Existing Literature (Rikka et al., 2023) and Case Managers' Perceived Additions from the Prototyping Study, Organised by Behavioural Dimension and COM-B Component (codes refer to Table 2)

Dimension	COM-B	Already known (Rikka et al., 2023)	Empirical addition from case managers' perceptions (this thesis)
1. Decision-making and cooperation with inmates	Capability	Unclear guidelines limit consistent application	Rigid 1/2 scoring categories force choices that case managers cannot fully justify; the prototype's free-text justification at the end of each topic was associated with more articulated professional reasoning (codes 1.1, 1.2)
	Opportunity	Time-consuming process leaves less time for considered judgement and dialogue with the inmate	Process is opaque to the inmate, preventing joint decision-making; this opacity also generates downstream administrative work (written objections, occasional court recourse) that joint completion was perceived to reduce (codes 1.3, 1.4)
	Motivation	Demotivating effect on inmates due to negative emphasis	Supported and extended: case managers perceived opacity itself as a barrier to inmate engagement; transparent collaborative use was associated in participants' experience with stronger trust and stronger inmate willingness to engage (code 1.5)

2. Understanding of the inmate	Capability	Large volume of information, much about distant past, dilutes attention	Supported; further specified: the deficit-focused lens itself narrows the case managers' picture beyond what data volume alone explains. Structured space for strengths and resources alongside risks broadens the view (code 2.1)
	Opportunity	(not addressed)	The inmate's own perspective is structurally absent. There is no self-assessment component, removing a key opportunity for triangulation between inmate and case manager perspectives *(codes 2.2, 2.3)*
	Motivation	(not addressed)	A primarily negative framing reduces case managers' incentive to attend strengths; this also misaligns with what case managers reported inmates have repeatedly asked for. To be acknowledged for positive change rather than only for past failings (code 2.4)
3. Producing relevant input for sentence planning	Capability	Distant past content limits relevance for current planning	Supported and extended: assessment outputs are not directly mappable to actionable interventions, and considerable upstream information-gathering from external databases adds little to current sentence planning (codes 3.1, 3.2)
	Opportunity	*(not addressed)*	Separation between assessment and planning steps creates duplication; integrating them into one session reduces the need for follow-up conversations and the upstream querying burden described above (codes 3.3, 3.4)
	Motivation	Stable risk levels offer limited dynamic input for plan revision	Supported and extended: producing extensive reports that do not visibly inform plan changes reduces motivation to invest in thorough completion; goal setting carried out jointly with the inmate gives a more visible link between assessment work and the resulting plan (code 3.5)
4. Using the tool consistently and confidently	Capability	Difficult to use; unclear guidelines reduce comprehension	Supported and further specified: simpler structure and format reduce cognitive load. However, translation issues and a small number of Norway-specific items introduce residual capability barriers specific to the adaptation (codes 4.1, 4.2)

	Opportunity	Technical issues impede smooth use	Supported and extended: high workload and time pressure further constrain considered use; consolidating overlapping items (alcohol, drug, and addiction sections) was specifically suggested as an opportunity-side improvement (code 4.3)
	Motivation	Tool is perceived as outdated, reducing engagement	Supported and extended: case managers experienced rigid scoring as a source of stress, while flexible reasoning was associated with a more positive user experience and with case managers feeling their professional judgement was respected (code 4.4)

Three patterns are worth highlighting. First, in dimension 1, the empirical findings extend Rikka et al.'s account of opacity: case managers perceived that opacity not only weakens trust between case manager and inmate but also generates additional downstream administrative work in the form of written objections and occasional appeals to court, which joint completion was perceived to reduce. Second, in dimension 2, the empirical findings identify both opportunity barriers (the structural absence of inmate self-assessment) and motivation barriers (the disincentive to look for strengths, which also misaligns with what case managers reported as inmates have repeatedly asked for) that Rikka et al. did not address. Third, in dimension 3, the empirical findings add the workflow-integration dimension and the upstream information gathering burden to what was previously known primarily as a content problem. These are precisely the areas where the prototype's design most directly responds to gaps identified in this thesis.

This pattern matters for two reasons. First, it confirms that the prototype's improvements are not localised to a single behavioural dimension or COM-B component. They cohere as a system. Second, it suggests that any future implementation would need to attend to all three COM-B components simultaneously: improving the tool alone, without changing how it is used or how it is integrated into the workflow, is unlikely to produce the full benefits anticipated by participants.

3.4. Theoretical Alignment

The findings do not test RNR or desistance theory directly. Rather, they show how both perspectives can be translated into design requirements for an assessment tool used in sentence planning. RNR is reflected in case managers' need for assessment outputs that remain relevant and can be linked to concrete interventions (Andrews & Bonta, 2010;

Bonta & Andrews, 2017). This was visible in participants preference for information that focuses on current risks and needs rather than extensive historical detail that does not clearly inform the individual treatment plan. The prototype's value from an RNR perspective therefore lies not in improving risk prediction, which was not tested in this study, but in strengthening the link between assessment content and intervention planning.

Desistance theory is reflected in the way participants value the prototype's self-assessment component, its attention to strengths and resources and its potential to make conversation with the inmate less focused on risk factors (Maruna, 2001; Maruna & LeBel, 2003; McNeill, 2006; McNeill & Weaver, 2010). These features were not valued only as abstract rehabilitative ideals, but as practical ways to make the assessment process more transparent, collaborative and usable for sentence planning. Although inmate engagement was not directly measured in this study, case managers anticipated that a more collaborative and strength-based approach could support inmate involvement. Whether this anticipation translates into actual inmate engagement remains an empirical question for the proposed impact study (Chapter 4).

3.5. Limitations of the Study

Several limitations should be noted. The sample is small (six case managers) and was selected purposively rather than randomly. This sampling approach may have affected the findings in two ways. First, the selection privileged case managers willing and able to engage with a structured prototyping session, who may be more reflective about their practice than the average case manager and thus more articulate about the prototype's strengths and weaknesses. Second, the sample was drawn from a single Estonian prison, so the findings may not generalise to settings with different organisational cultures or inmate populations. Random sampling across all prisons could have produced a wider range of evaluations. A further limitation relates to the author's role as described in Section 3.1.7. Although mitigation measures were taken, this bias cannot be excluded. Participants may have softened their criticism to support a colleague's work, which may have led the findings to overstate the prototype's advantages.

The findings should also be interpreted considering the assessment tool against which the prototype was evaluated. Participants assessed the prototype in relation to their experience with the current OASys based tool. The findings therefore reflect a comparative judgement rather than a standalone evaluation. If participants had been asked to assess the prototype against a different assessment tool or without reference to an existing tool, their perceptions may have differed.

The prototype was tested as a text document mock-up rather than as an implemented system, which limits inferences about how it would behave under real workload conditions, with technical interfaces and across multiple sentence-planning cycles. The prototype was not tested with inmates themselves, so claims about how the tool affects inmate engagement remain hypothetical and based on case managers' anticipated experience. In addition, the prototype was tested using a simulated case rather than through direct interaction with an inmate. Therefore, findings on cooperation, transparency and engagement reflect what case managers anticipated would happen, rather than what was observed in practice. Translation and contextual fit issues identified by participants further indicate that additional adaptation work is needed before broader testing. Finally, the four behavioural dimensions used to organise this thesis were shaped by the prior research on the current tool's limitations (Rikka et al., 2023) and by a single focus group with six case managers. While this convergence between literature and empirical data provides a stronger foundation than either source alone, the generalisability of these dimensions to a wider population of case managers remains an empirical question for further study.

These limitations do not invalidate the findings, but they define the types of conclusions that the present data can support. The findings should be understood as evidence of case managers perceived and anticipated responses to the prototype, rather than as evidence of its effects in routine practice. They therefore strengthen the reason for the impact study proposed in Chapter 4.

4. Proposed Impact Assessment

4.1. Purpose and Research Questions

This chapter outlines a proposed impact assessment for evaluating the prototype if and when it is implemented in practice. The qualitative findings of this thesis show that case managers perceived the prototype as more structured, usable and directly connected to sentence planning than the current OASys-based tool. However, these findings are based on a single prototype session with a text document mock-up. Therefore, a follow-up pilot study is needed to examine whether the perceived benefits translate into observable changes in everyday practice.

The proposed impact assessment would examine whether the observable changes in case managers' assessment behaviour occur after the prototype is introduced and whether the practical link between assessment and individual treatment planning appears to improve during implementation. The study would be guided by three research questions:

1. Does the prototype change how case managers conduct assessments, particularly whether assessments are completed jointly with inmates and whether completed assessments provide usable input for sentence planning?

2. Does the prototype change how inmates engage with the assessment process, particularly whether they complete the self-assessment component and report a stronger sense of involvement?

3. Does the prototype change case managers' experience of the assessment work, particularly whether they report reduced time pressure, more confident professional reasoning and greater alignment between assessment outcomes and sentence planning?

4.2. Proposed Design and Measures

The proposed study would compare how the same case managers work with the current tool and with the prototype. Their work with the current OASys-based tool would form the baseline condition, while their work with the prototype would form the implementation condition.

The design is appropriate because the population of case managers in the Estonian Prison Service is small. Dividing participants into separate intervention and control groups would likely leave too few people in each group for meaningful comparison. A before-after design avoids this problem by comparing the same case managers before and after the prototype is introduced. It also makes the baseline more realistic, because case managers would already be using the OASys-based tool in their everyday work. The baseline period therefore does not add extra work and reflects current practice. A before-after pilot would not provide final causal evidence, but it would be suitable for testing feasibility and identifying whether the expected behavioural changes appear in practice.

The pilot could be conducted in one Estonian prison with approximately six to ten case managers over a six-month implementation period. The main indicators would be:

1. **Joint completion rate** – the proportion of assessments completed together with the inmate.
2. **Inmate engagement with self-assessment** – whether inmates complete the self-assessment component and how involved they report feeling.
3. **Integration with the individual treatment plan** – the extent to which assessment results are reflected in concrete activities in the individual treatment plan.

4. **Case manager experience** – perceived clarity, confidence in professional judgement, time burden and stress during assessment work.

Data could be collected through assessment records, document analysis of individual treatment plans, short case manager surveys and brief inmate questionnaires or interviews.

4.3. Practical and Ethical Considerations

A realistic implementation timeline would be approximately twelve months: two to three months for refining the prototype, one month for training and baseline preparation, six months for implementation and two months for follow-up data collection and analysis.

Because inmates would be directly involved, ethics committee approval would be required. Inmate participation in interviews or questionnaires should be voluntary, confidential and clearly separated from decisions about their individual treatment plans, privileges or sentence progression. Case managers would also need clear training on how to use the prototype collaboratively and consistently.

4.4. Conclusions and Recommendations

The proposed impact assessment would test whether the benefits identified in this thesis are visible in real working conditions. If the pilot shows improvements in joint completion, inmate self-assessment, individual treatment plan integration and case managers experience, this would provide a stronger basis for further developing the prototype into an implemented system.

The findings of this thesis suggest that future development of assessment tools in the Estonian Prison Service should include prototyping cycles with case managers before technical implementation. This would help ensure that the tool supports case managers' work from the beginning, rather than correcting problems only after the tool has already been put into use.

5. Conclusion

"*I'm not taking the inmate based on some numerical score or some percentage but rather looking at what he actually needs*" (Participant 4)

This thesis examined how a structured mapping tool, adapted from the Norwegian BRIK tool and grounded in RNR and desistance theory, fits the behavioural reality of Estonian case managers' work. The initial framing of four behavioural dimensions of case management practice built on prior analysis of the current tool's limitations (Rikka et al., 2023). The semi-structured focus group interview subsequently supported and refined these dimensions: decision-making and cooperation with inmates, understanding of the inmate, producing relevant input for sentence planning and using the tool consistently and confidently. The COM-B framework was used throughout to diagnose where the current tool falls short and to interpret how the prototype may shift case managers' capability, opportunity and motivation across these dimensions.

The findings indicate that case managers perceived the prototype as an improvement over the current risk assessment tool across all four dimensions. The clearest perceived improvements concerned potential transparency for inmates, structured attention to strengths alongside risks, and closer integration between assessment work and sentence planning. As inmates were not included in this study, the findings concerning inmate transparency and involvement are based on case managers' perception. Participants also perceived that the prototype could reduce unnecessary information gathering before assessment and administrative friction after assessment. However, whether these perceived improvements translate into measurable changes in sentence planning process quality remains to be tested in real-life conditions and, crucially, with inmates themselves. Chapter 4 therefore outlined a feasible next step: a pilot study in one prison comparing case managers' work before and after they start using the prototype, using four practical indicators to assess whether the perceived behavioural changes hold under real workload conditions.

The contribution of this thesis is twofold. First, it provides a concrete prototype that responds to identified limitations in the current assessment process. Second, it offers an analytical framework that translates risk assessment design into behavioural terms. Together, these contributions provide the Estonian Prison Service with a starting point for behaviourally grounded development of its assessment practice.

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Annex 1. Interview Plan for Semi-structured Interviews for Qualitative Research

1. What aspect of the tool or process felt clear and easy to use?
2. What aspects felt unclear or confusing? Why?
3. What did you find difficult? Why?
4. At which points did you hesitate before answering?
5. Which questions require adaptation or translation to Estonian context?
6. Where did you feel that your answer did not fit within the provided framework?
7. Which questions felt too direct or too indirect in the Estonian context?
8. In your opinion, are any questions unethical or lacking practical value?
9. Would the assessment tool support your work, or would it constrain you excessively?
10. Which concepts require adaptation to the Estonian cultural context?
11. In which parts did you rely more on your professional experience than on the tool?
12. How do you evaluate the topics of the tool (self-assessment, restorative justice)?
13. How does assessment tool support you in performing your work? Are there any benefits or downsides?
14. In what ways does the assessment tool make your work more difficult?
15. How does the tool affect your interaction with inmates?
16. How does the tool affect your workload? Please provide examples.
17. To what extent do you think inmates would manipulate the results of the assessment tool?
18. How does the tool support sentence planning?
19. What changes would be necessary in your current work environment to enable effective use of the tool?
20. What barriers currently limit the effective use of the assessment tool?
21. In what ways could the assessment tool support your work?
22. Is there anything you would like to add?

Annex 2. Informed Consent Form

Magistritöö raames läbiviidav uurimustöö "*Contextual Fit of a Structured Mapping Tool in Estonian Prison Officers' Decision-Making*"[2] (2026)

Lugupeetud inspektor-kontaktisikud, Teid on palutud osaleda magistritöö raames läbiviidavas uurimuses, mille eesmärgiks on hinnata, milline on inspektor-kontaktisikute kogemus hindamisvahendi kasutamisel.

Mis on informeeritud nõusolek?

Informeeritud nõusolek tähendab uuringus osalemiseks nõusoleku andmist, kuid ainult juhul, kui mõistate täielikult, mis sellega kaasneb. Te allkirjastate käesoleva informeeritud nõusoleku vormi ainult juhul, kui olete nõus uuringus osalema. Allkiri antud dokumendil näitab, et olete kogu informatsioonist aru saanud ja soovite osaleda.

Informatsioon uuringu ja intervjuu kohta

Uurimuse "*Contextual Fit of a Structured Mapping Tool in Estonian Prison Officers' Decision-Making*" ja intervjuud viib läbi Tartu Ülikooli psühholoogia instituudi tudeng Kristel Floren-Anslan. Intervjuu kestab ligikaudu poolteist tundi ja see salvestatakse. Intervjuud toimuvad intervjueerija ja küsitletava poolt varem kokkulepitud kohas. Küsimused puudutavad hindamisvahendist arusaadavust.

Uurimuse käigus kogutud andmeid kasutatakse ainult teadustöös. Uuritavate isikuandmeid ei avalikustata teaduspublikatsioonides ega ka kolmandatele osapooltele. Sinu nime ega kontaktandmeid ei lisata kokkuvõtetesse ega jagatavatesse materjalidesse. Kõik tsitaadid aruannetes või esitlustes anonümiseeritakse (nt „Osaleja 3").

Uuritava õigused

Uuringus osalejal on õigus ilma igasuguse põhjenduseta keelduda vastamast mõnele küsimusele, katkestada uurimuses osalemine intervjuu ajal, samuti nõuda pärast intervjuu lõppu kuni magistritöö eelkaitsmisele edastamist oma andmete kõrvaldamist kogutud materjalide seast.

Küsimuste tekkimisel pöörduge uuringu läbiviija poole: Kristel Floren-Anslan (kristel.floren@gmail.com), juhendaja Andero Uusberg (andero.uusberg@ut.ee), Erik Halvorsen (erik.halvorsen@krus.no).

Kui Teil tekib küsimusi uuringus osaleja õiguste kohta, siis pöörduge palun Tartu Ülikooli inimuuringute eetikakomitee poole e-posti aadressil eetikakomitee@ut.ee või telefonil 737 6215.

Kui Teil tekib küsimusi uuringus osaleja andmekaitse kohta, siis pöörduge palun Tartu Ülikooli andmekaitsespetsialisti poole e-posti aadressil andmekaitse@ut.ee

Mind, ... on informeeritud ülalmainitud uurimusest ja ma olen teadlik läbiviidava uurimistöö eesmärgist ja uurimuse metoodikast ning kinnitan oma nõusolekut selles osalemiseks allkirjaga.

Uurimuses osaleja allkiri .....

Kuupäev, kuu, aasta .....

[2] The study's title was refined during the research process. In this thesis, the work appears under the title "How Assessment Tool Design Shapes Case Managers' Behaviour in Sentence Planning". The earlier title used in this consent form, "Contextual Fit of a Structured Mapping Tool in Estonian Prison Officers' Decision-Makin" refers to the same study.

Uurimuses osalejale informatsiooni andnud isik: .....

Uurimuses osalejale informatsiooni andnud isiku allkiri: .....

Kuupäev, kuu, aasta: .....

Annex 3. Declaration on the Use of Artificial Intelligence Tools

In preparing this thesis, I used the artificial intelligence tool ChatGPT to support the search for relevant academic literature, language checking, clarification of academic wording. The tool was used in the final stages of the writing process to identify unclear wording, improve sentence structure and support the refinement of academic expression. All academic sources identified with the support of ChatGPT were independently verified before being used in the thesis.

Artificial intelligence was not used to collect empirical data, transcribe the focus group interview, conduct the thematic analysis, generate research findings or formulate conclusions. All analytical decisions, interpretations and conclusions presented in the thesis are my own. All text that was revised with the support of artificial intelligence was critically reviewed, edited and approved by the author.

The use of artificial intelligence followed the University of Tartu guidelines on the use of artificial intelligence in teaching and research. The author remains fully responsible for the content, accuracy and integrity of the thesis.

Kristel Floren-Anslan
30.05.2026

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