Potential benefits of introducing OKRs at marine engineering contractors

A qualitative study at Van Oord

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A qualitative case study at Van Oord

By

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Abstract

In a rapidly evolving industry, Van Oord, a leader in marine engineering and offshore energy, seeks to better align its strategic objectives with operations to drive innovation and achieve sustainability targets. The company faces challenges in aligning goals across departments in complex, multi-stakeholder projects. While Objectives and Key Results (OKRs) present a promising goal-setting framework, implementing OKRs in an asset-based, project-driven organization like Van Oord is challenging due to the need for interdepartmental alignment, clear accountability, and strategic coherence. There are examples of this method being introduced in technology driven organizations, but a direct comparison to a marine engineering contractor is not found. The study has used qualitative methods, including a systematic literature review and a case study consisting of three use cases at Van Oord, examining OKR implementation through interviews, observations, personal communications and online documentation. Findings show that OKRs are widely seen as a promising tool for improving goal visibility, alignment, and cross-departmental collaboration, especially in innovation-focused teams. However, their feasibility depends on careful adaptation to existing reporting systems, team autonomy, and time constraints. The thesis concludes that OKRs can add clear value when introduced incrementally, with team-led pilots and integration into existing planning rhythms. The study contributes to both theory and practice by offering design recommendations for OKR adoption in complex engineering organizations and identifies areas for future research, including the integration of OKRs with sustainability metrics and long-term strategic planning.

Keywords: Marine Engineering, Objectives and Key Results, Goal-setting, Sustainable Energy, Strategic Alignment

Executive Summary

In the fast-evolving marine engineering and offshore energy sector, ensuring strategic alignment with operational execution remains crucial. Van Oord, a leading Dutch marine engineering contractor, operates in a complex, project-driven and asset-based environment where tracking progress, fostering cross-departmental collaboration, and maintaining strategic focus present ongoing challenges. As the company seeks to drive innovation and streamline goal-setting, the Objectives and Key Results (OKRs) framework has come forward as a potential tool for increasing transparency, accountability, and adaptability. However, while widely adopted in technology-driven industries, the application of OKRs in project-driven, asset-based organizations remains largely unexplored. This study examines whether OKRs are a viable framework for Van Oord by assessing their potential benefits, feasibility, and challenges through a structured qualitative approach.

The central research question guiding this study is: *"What is the desirability and feasibility of implementing OKR frameworks at marine engineering contractor Van Oord?"* To answer this, the research explores key drivers and best practices for OKR adoption, analyses employee perceptions at Van Oord regarding OKRs' benefits and challenges, and evaluates how these findings align with existing literature.

A qualitative research approach was employed, combining a systematic literature review and three use cases. The literature review examined existing research on OKR adoption, particularly in tech and project-based industries, to identify best practices, success factors, and common challenges. Empirical research was conducted through a case study including interviews, collecting employees' perspectives on the desirability and potential impact of OKRs within the company. The findings from these empirical studies were then compared with theoretical insights to bridge practical experiences with existing knowledge.

Key Findings

The literature review revealed that OKRs are often introduced to address challenges similar to those at Van Oord: fragmented reporting, lack of strategic alignment, and difficulty tracking non-financial progress. Successful implementations were typically supported by leadership engagement, iterative goal-setting cycles, and integration into existing systems. The risks of overcomplexity, tool fragmentation, and cultural misalignment were also explained.

At Van Oord, employees across the three use cases expressed a strong interest in improving clarity, collaboration, and accountability. OKRs were broadly seen as a promising method to make innovation and sustainability work more visible and measurable. However, concerns were raised about time constraints, integration with existing tools, and the risk of "framework fatigue." Many participants favoured a gradual, bottom-up introduction, with OKRs initially piloted in teams already working on long-term or exploratory initiatives.

The research concludes that OKRs offer clear added value in supporting alignment, transparency, and cross-functional engagement at Van Oord, particularly in innovation-heavy and sustainability-focused teams. However, the feasibility of broader adoption depends on careful adaptation to Van Oord's asset-based, project-driven structure, reporting rhythms, and culture of operational autonomy. OKRs should not be positioned as a universal replacement for existing systems, but rather as a lightweight, flexible complement that can bring structure to complex, purpose-driven work.

Recommendations for Van Oord include piloting OKRs in selected departments, integrating the method with existing digital tools and reporting structures, and providing targeted onboarding for managers and team leads. For future research, longitudinal and quantitative studies are encouraged to assess the long-term behavioural and performance impacts of OKR implementation in complex engineering environments.

Preface

This thesis marks the end of my academic journey at TU Delft (for now) and the final step of the Master's programme Complex Systems Engineering and Management. The journey has been intellectually stimulating, at times challenging, but ultimately deeply rewarding. I started this process out of motivation for sustainable solutions, and a personal interest in engineering and technology. In the Netherlands, Van Oord is seen as a great and respectable leading example for Dutch innovation and marine engineering, so I am thankful I got the opportunity to witness the daily activities of this marvellous company firsthand.

First of all I should like to thank Marcel Papenhove for introducing me, and Lenny de Kleijnen for tirelessly emailing the various departments at Van Oord until the perfect match for my graduation project was found: assessing the feasibility of introducing OKRs at Van Oord. But of course, the execution of this project would not have been possible without the help of my graduation committee.

Throughout the course of this process I have always felt very much supported by my committee. My first interaction with the topic was with Gerben de Boer, whose idea it was to take a deeper dive into OKRs. Thank you Gerben for showing me around at Van Oord, introducing me to the right people in a company where I hadn't met anyone yet, and always being open to discuss and brainstorm the course of this project. I genuinely hope the findings of this research can inspire the teams at Van Oord, and I have no doubt they will be put to good use. I happily look back at the weekly meetings we had and I think your enthusiasm for innovation really helped me get into the subject as well as see the bigger picture. Thanks to the many colleagues at Van Oord who showed me around and took the time to participate in interviews with me. Your input and personal stories helped me realize how this research can help Van Oord to not only become a more efficient, but also a more socially connected and modern company.

Ellen, thank you for the interest you showed me in the topic and the advice you gave me along the way. I always felt in welcome hands to discuss with you any problems I was facing and I appreciate how you were eager to think along with the necessary steps I had to take. I think you really understood the essence of the research even though the topic was relatively new for both of us. You're a great person to communicate with, warm and easy going but precise and to the point when needed.

Lisa, thank you the expertise and sharp wit you brought me in the field of policy analysis. As you were the chair we did not speak that often but I am grateful for the advice you gave me in terms of theoretic background and your guidance towards a sound qualitative research design. You always seemed very interested in my process and the topic and I think you and Ellen make a great supervising team.

And last but least, I want to say thanks to my brothers, cousins and various other family members and friends that supported me along the way and showed interest. Niels especially, you gave me important advice for managing this project and helped spark my interest for OKRs and management methods in general based on your own experiences.

Floris M. de Haan
Puerto Escondido, June 2025

1 Introduction

1.1 Background

In today's rapidly evolving business climate, elevated by environmental concerns and restrictions, organizations need to align their strategic objectives with operations and innovation processes to efficiently achieve climate targets and be successful (S.E.A. Net Zero Emissions, 2024). The increasing prevalence of remote and international work arrangements has significantly influenced how employees collaborate and align their objectives (Stray et al., 2022).

Van Oord, a leading Dutch company specializing in dredging, marine engineering, and offshore energy projects, is an asset-based company that operates project-wise in a complex and dynamic environment. Because the nature of Van Oord's operations has many different aspects, the need for an adequate goal-setting and performance management framework for their innovation process is crucial.

Van Oord's projects are known for their large scale, complexity, and the need for collaboration across departments. Each project involves various stakeholders, such as engineers and project managers, all with their own objectives and deliverables (Personal Communication, 2024). Because of this, departments are often not fully aligned, leading to communication issues and difficulties in tracking progress towards long-term strategic goals (Henderson & Venkatraman, 1990).

1.2 Strategic alignment

To gain an understanding of what alignment between strategic objectives and operational processes entails, it is important to make a clear distinction between the terms *strategic, tactical,* and *operational*. The strategy that a company uses is formulated as a long-term plan to set direction involving the actions that need to be taken to realise its purpose (White, 2004). Whereas tactical processes refer to the choices that are made within the budgets that are set for each plan, and operational processes are intended to optimize the choices thar are made, so that no resources to go waste (Nechkoska et al., 2015).

Strategic alignment is critical for organizations to differentiate themselves from competitors. It involves formulating a long-term vision, supported by tactical decisions and operational processes that optimize resource allocation and execution (Chandler, 1962; Porter, 1996). Simply put, strategy defines the behaviours and actions that enable a company to move from its current position to its desired future state in the most efficient way possible, considering the resources available(McKeown, 2019). Since strategy is a means, not an end, there must also be focus on execution, with mechanisms in place to measure and evaluate its performance and outcomes over time (Orr, 2007).

Operations management refers to the execution of a strategy and the administration and control of the resources that are needed. Operations management also includes the administration and application of business structure, practices, and purposefully designed processes or systems in order to better understand or improve specific business activities (Prokop, 2022). Where strategy describes the goal of an organization and the road that needs to be taken to get there, operations describe the tools it will use to overcome the hurdles on that road.

1.3 Objectives and Key Results

Objectives and Key Results (OKRs) are a goal-setting framework designed to help organizations connect their strategic objectives with measurable outcomes. First introduced by Andy Grove at Intel in the 1970s and later made famous by Google, OKRs provide a structured way to set ambitious goals and track progress through specific key results (Doerr, 1999). The framework promotes transparency, accountability, and alignment by ensuring that employees across different levels and departments are working towards shared goals. While OKRs have been extensively used in technology and startup sectors, their adoption in asset-based, project-driven industries - such as marine engineering - remains underexplored. This study examines whether OKRs can provide strategic and operational benefits in such a complex setting.

The importance of measuring business performance and strategy is reflected in widely recognized approaches, such as Walton's statement: *"If you can't measure it, you can't manage it."* (Walton, 1989 (P20)). Whether it's the act of measurement itself or the criteria used, measurement has a direct impact on team performance. It helps organizations handle challenges more effectively by increasing the likelihood that employees will show behaviour aligned with the company strategy. Whether viewed from a broader strategic perspective or an operational one, managing key indicators has become almost synonymous with management itself, as it plays a crucial role in guiding the company's direction, regardless of the context (Troian et al., 2022).

1.3.1 Background

Contemporary goal-setting frameworks and performance management systems have evolved substantially since the mid-20th century. Foundational thinkers such as Drucker (1954), Selznick (1957), Chandler (1962), and Ansoff (1965) laid the groundwork for strategic management tools that sought to align organizational objectives with operational practices (Radonic, 2017). One of the earliest of these frameworks, Management by Objectives (MBO), aimed to align employee efforts with managerial goals through collaborative goal-setting processes. While strategic in conception, the outcomes of MBO have often been limited to operational targets, and its application has sometimes lacked the adaptability required in dynamic, cross-functional environments.

As management practices have evolved, new frameworks have come forward to address these shortcomings. Among them, OKRs offer a more agile, transparent, and outcome-driven approach to setting and tracking goals. However, to fully understand their potential relevance for Van Oord, it is essential to explore how OKRs relate to core theories of organizational performance and decision-making. In the sections that follow, several conceptual frameworks are introduced to provide a theoretical foundation for assessing OKR implementation.

1.3.2 Goal-Setting Theory

The concept of OKRs is closely connected to Goal-Setting Theory, developed by Edwin Locke and Gary Latham in the 1960s. This theory suggests that specific and challenging goals lead to higher levels of performance than vague or easily attainable ones. It identifies several conditions under which goal-setting is most effective: goal clarity, commitment, feedback, and consideration of task complexity (E. A. Locke & Latham, 1991; E. Locke & Latham, 2013).

OKRs bring this theory into operation by requiring organizations to articulate long-term objectives and break them down into concrete, measurable key results. These key results provide clarity and ensure that each individual within the organization can understand how their work contributes to broader strategic goals. Moreover, the OKR methodology includes regular review and feedback cycles, reinforcing one of Goal-Setting Theory's central tenets: that continuous feedback improves focus, engagement, and performance.

In organizations like Van Oord, where long-term projects and cross-functional collaboration are the norm, such structured alignment between individual and organizational goals could support both accountability and strategic clarity. However, the application of goal-setting theory in such an engineering-intensive environment requires consideration of scale, timelines, and the diverse functions involved in marine engineering projects.

1.3.3 Decision Analysis and Stakeholder Involvement

Beyond the behavioural perspective offered by Goal-Setting Theory, decision analysis frameworks offer a complementary view of OKRs as tools for structuring strategic decisions across complex organizations. Miller et al. (2008) emphasize the importance of involving multiple stakeholders in the decision-making process, especially when the decisions pertain to organizational change or new management tools. Their findings suggest that inclusive strategic decision-making enhances goal alignment, relevance, and execution.

For Van Oord, where multiple departments contribute to large-scale, multidisciplinary projects, stakeholder involvement is critical for successful OKR implementation. Department heads and key project staff must participate in defining objectives that reflect both operational realities and long-term strategic goals. This ensures that OKRs remain practical and aligned with the day-to-day workflows of each department while also supporting broader corporate objectives (Miller et al., 2008).

Furthermore, Bond et al., (2010) underline the necessity of systematic methods for defining and clarifying objectives in order to support decision quality. Their work stresses the value of structured frameworks to ensure that objectives are not only ambitious and aligned, but also measurable and actionable. Within the context of OKRs, this means that each department must

formulate their goals with clear criteria for success, while allowing for iterative refinement based on feedback—a concept closely aligned with Van Oord's dynamic project cycles.

Together, these theoretical perspectives demonstrate that OKRs, when carefully designed and embedded within inclusive decision-making processes, have the potential to support both strategic cohesion and decentralized execution in complex organizations.

1.3.4 Self-Determination Theory and OKRs

In addition to the structural and cognitive dimensions of goal-setting, Self-Determination Theory (SDT) provides a psychological lens through which to assess the potential of OKRs in fostering motivation and engagement. Developed as a theory of human motivation and personality, SDT explores the extent to which individuals are driven by intrinsic versus extrinsic factors, and how their behaviour is shaped in the absence of external control (Ryan & Deci, 2000, 2017).

One branch of SDT, Basic Psychological Needs Theory, identifies three fundamental human needs that must be met to support well-being and optimal functioning: autonomy, competence, and relatedness (Ryan & Deci, 2000). These needs have direct implications for the design of performance management systems like OKRs.

Autonomy refers to the experience of acting in alignment with one's own values and choices. OKRs can support autonomy when employees are encouraged to participate in setting their own objectives, rather than having goals imposed top-down. By fostering a bottom-up goal-setting process, OKRs enhance psychological ownership and self-direction (Deci & Vansteenkiste, 2004).

Competence relates to an individual's perceived ability to succeed in their tasks. OKRs encourage specific, challenging goals with measurable outcomes, allowing employees to track their progress and receive frequent feedback. This visibility reinforces a sense of achievement and self-efficacy. Positive feedback in the OKR process - particularly when provided during review cycles - can further bolster motivation (Ryan & Deci, 2017). On the other hand, negative feedback can diminish motivation by undermining people's belief in their own capabilities (Vallerand & Reid, 1984).

Relatedness refers to the need to feel connected to others - to care for and be cared for. It involves meaningful social interactions and a sense of belonging (Baumeister & Leary, 1995). According to SDT, when people feel related to those around them, it supports their motivation and personal development. In contrast, a lack of relatedness can hinder psychological growth and well-being (Vansteenkiste & Sheldon, 2006).

By aligning with these three psychological needs, OKRs have the potential to not only guide performance but also enhance employee motivation, satisfaction, and engagement - all of which are crucial for sustained success in high-performance, project-oriented environments like Van Oord.

1.3.5 Positioning OKRs Among Other Goal-Setting Frameworks

OKRs are part of a broader evolution of goal-setting and performance management frameworks, including MBO, KPIs, and the Balanced Scorecard (BS). While these traditional models offer structure and strategic alignment, they often fall short in promoting flexibility, cross-departmental transparency, and continuous feedback- areas in which OKRs excel (Doerr, 1999; Troian et al., 2022)

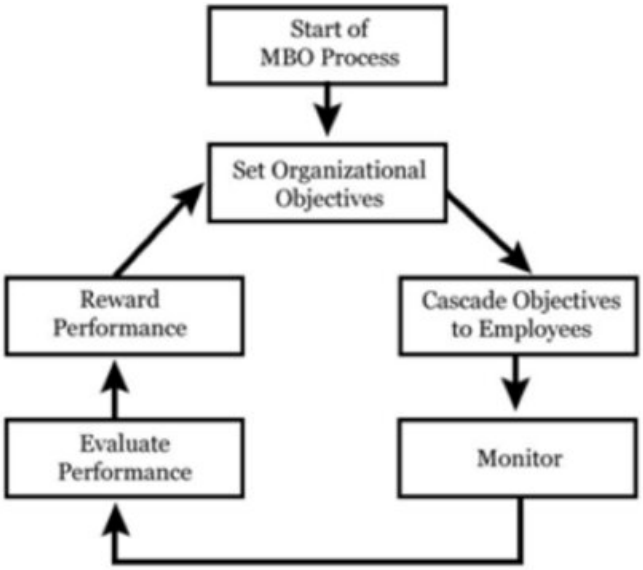

Figure 1: Diagram of the MBO five-step process (Drucker, 1975).

Key differences include the frequency of review, with OKRs typically being revisited quarterly or monthly rather than annually, and the degree of transparency, as OKRs are often made visible across all levels of the organization. Furthermore, the aspirational nature of OKRs, which accept partial completion as a sign of ambitious progress, marks a cultural shift from the binary success/failure thinking of traditional management-by-objectives systems, a schematic overview of which can be seen in figure 3.

These differences are especially relevant in fast-paced, innovation-driven sectors. Yet, their applicability in engineering-intensive, capital-heavy, and project-based contexts - such as marine engineering - remains underexplored.

1.3.6 Bridging the Knowledge Gap

While the literature reviewed thus far provides valuable insights into the design, theoretical grounding, and perceived benefits of OKRs, it also reveals a notable research gap: there is a lack of empirical studies on OKR implementation in asset-based, engineering-intensive industries. Most scholarly and practitioner literature focuses on use cases in technology, software, or startups, where iterative cycles and flat hierarchies are more common.

This gap is significant for organizations like Van Oord, where operations span long-term projects, multiple departments, and complex stakeholder networks. To assess whether OKRs can effectively support strategy execution and alignment in such a context, it is necessary to examine not just what works in other industries, but what adaptations might be required for success in marine engineering.

The systematic literature review therefore seeks to provide a conceptual and empirical foundation for evaluating OKRs in a project-based setting. It offers a categorized overview of the academic discourse surrounding OKRs, covering motivations, challenges, implementation strategies, and contextual dependencies, and serves as the basis for the empirical investigation that follows in the subsequent chapters.

1.4 Problem Statement

Van Oord's corporate strategy is structured around three central themes: The Right People, Sustainability, and Digitalization. As part of its sustainability ambitions, the company has defined four strategic pillars: Enhancing the Energy Transition, Accelerating Climate Actions, Empowering Nature & Communities, and Achieving Net Zero Emissions. These pillars form the foundation of Van Oord's long-term environmental vision and are operationalized through the Sustainable Earth Actions (S.E.A.) programme. This programme functions as an overarching coordination mechanism, to unify diverse sustainability initiatives under a single, strategic narrative (S.E.A., 2024).

However, while the strategy clearly communicates Van Oord's long-term ambitions, it remains largely non-actionable at the operational level. The strategic themes and pillars are high-level and value-driven, but they are not broken down into concrete, measurable objectives that guide daily decision-making across departments and projects. This creates ambiguity for teams regarding how their individual efforts contribute to broader company goals.

The OKR framework offers a potential solution to this issue by translating strategy into tangible, time-bound objectives with measurable outcomes. By introducing OKRs, the company aims to improve strategic alignment between departments on goals and budgets, create insight into the ongoing innovations, enable cross-departmental accountability, and ensure that bottom-up ideas from teams are contributing to overall company objectives. VOX Innovation, a team that focusses on alignment and strategic development for innovations within the company, has decided to investigate the feasibility of implementing OKR frameworks at Van Oord. One of the team's main tasks, *"Creating an inventory of current innovations, analysing coherence and establishing multi-level synergies in order to achieve corporate strategy objectives"*, is perfectly in line with this project (VOX Innovation, n.d.).

Although OKRs offer potential benefits, implementing this framework in a complex, project-based organization such as Van Oord comes with considerable challenges. These include drafting and sharing OKRs in the first place, and subsequently ensuring that these OKRs are correctly aligned with the company's strategic goals, integrating them into existing processes without disrupting operations, and securing commitment from all levels of the organization.

Furthermore, the OKR methodology was developed in sectors related to software development. In the past few years this method has become popular in large scale (agile) companies but its effectiveness in these companies and integration of OKRs into existing management structures is under researched.

1.5 Research Objectives and scope

The objective of this research is to evaluate the added value of introducing the OKR methodology at a marine engineering contractor by analysing the preferred conditions for implementing OKRs and assessing the attitude of employees of several use cases at Van Oord towards this method. Van Oord's main headquarters in Rotterdam is a unique environment to analyse this method, where the company's strategic direction is set, innovation happens and the communication to project operations takes place. Certain departments that are familiar with the OKR method can be analysed as an example for the rest of the company.

The research seeks to determine whether the OKR method is suitable for Van Oord in order to:

- Provide more insight into the progress of ongoing innovations;
- Better align top-down strategic goals and the operation thereof;
- Align the sharing of new ideas, innovations and knowledge that are developed bottom-up in projects;
- Increase the effectiveness of individual employees.

1.6 Research questions

To guide the direction of this project and to reach the research objective, a main research question RQ has been formulated:

"What is the desirability and feasibility of implementing OKR frameworks at marine engineering contractor Van Oord?"

Several sub questions have been formulated to help answer the main research question and divide the study in segments:

SQ1: What are the key drivers, best practices and main barriers for OKR adoption in comparable organizations?

The first research question will be addressed using a systematic literature review. Systematic literature reviews can answer pre-defined research questions using an explicit and reproducible method to identify, critically appraise and combine the results of earlier research studies and reviews (Pollock & Berge, 2018). The literature review is meant to provide general lessons and best practices for the implementation of OKRs in several contexts, most notably investigating OKR projects in marine engineering contractors. A quick search on the Scopus database has indicated that there numerous examples of OKR implementations - but not in this specific industry. Therefore, it will be worth it to perform a systematic literature review and get to the bottom of this topic.

SQ2: How do employees across different use cases related to Van Oord perceive the introduction of OKRs?

The second research question focusses on the perception of OKRs by employees at Van Oord. Through interviews and personal communication, the attitude towards OKRs will be evaluated. For this case study, respondents from different departments and management levels will be selected. At the same time, employees will be asked to formulate their own OKRs during the interviews as a way of testing their reactions. These findings seek to describe the added valu3e that OKR can have at Van Oord.

SQ3: To what extent do the case study findings align with the insights from the literature review?

To find out what the answers to the first and second questions mean for Van Oord, comparisons will be made between the findings. These comparisons will evaluate the compatibility of OKRs with existing systems, the level of understanding of the method and possible drawbacks.

1.7 Research strategy and structure

The approach to research strategy is a crucial decision when designing a practice-oriented study. To determine the most appropriate approach, the framework proposed by Verschuren & Doorewaard (2010) is used, addressing three key questions.

The first question concerns whether the research adopts a broad or in-depth perspective. Given the focus on analysing the conditions required for implementing OKRs at Van Oord and assessing their potential benefits, this study follows an in-depth approach, concentrating on specific organizational aspects rather than a broad industry-wide analysis.

The second and third questions relate to the quantification of the research and whether the study is empirical or desk-based. This research is primarily qualitative, using both empirical and desk research to find insights into OKR implementation. Desk research includes a systematic literature review to identify best practices, while empirical research is conducted through interviews with employees at Van Oord to understand the feasibility, challenges, and perceptions surrounding OKRs.

Research Phase	**Methodology**	**Purpose**
Literature Review	Systematic literature review	Identify key conditions, benefits, and challenges of OKR adoption in various organizational settings, particularly in project-based industries.
Empirical Research	Semi-structured interviews	Gather insights from employees at Van Oord regarding their perceptions of OKRs, their feasibility, and potential challenges in implementation.
Comparative Analysis	Case study approach	Compare findings from the literature review with empirical data to assess alignment, feasibility, and contextual factors affecting OKRs at Van Oord.
Synthesis of Findings	Thematic analysis of results	Identify patterns, differences, and key considerations for evaluating OKR integration at Van Oord.

Table 1: Research phases overview

Table 1 gives an overview of the four phases of this research including the used methodologies and their purpose. This research aligns with practice-oriented research, as it seeks to understand and optimize real-world practices within an existing organizational setting (Verschuren & Doorewaard, 2010).

1.7.1 Initial Research: Systematic Literature Review & Framework Development

A systematic literature review (SLR) is a critical step in developing a grounded understanding of a particular research topic, particularly when exploring emerging practices in complex organizational environments. The aim of the SLR is to explain the relevance and approach of comparing academic sources to identify overarching themes related to OKRs, and to assess why these themes are meaningful in the context of this research. The review intends to synthesize current knowledge on the design and implementation of OKRs across a range of industries and geographical contexts, offering valuable insight into how these frameworks have been applied beyond the technology sector in which they first emerged.

Although OKRs were initially developed and popularized in software companies, a growing body of literature examines their potential in more traditional and process-driven sectors. These studies often explore how OKRs function within different cultural, organizational, and operational settings. For a marine engineering contractor, active in diverse industries and operating globally, these varied case studies and theoretical reflections may offer useful perspectives. However, because the context in which OKRs are introduced plays a decisive role in their design and effectiveness, the insights drawn from these studies must be carefully interpreted before being applied to Van Oord's project-driven and asset-based environment. SLR examines:

- The prerequisites for successful OKR adoption,
- Common challenges faced in OKR implementation,
- The expected benefits of OKRs,
- Insights from industries that have successfully implemented OKRs, particularly outside the software sector.

This phase aims to provide a structured understanding of how OKRs influence strategic alignment, employee engagement, and knowledge-sharing, forming the basis for assessing the feasibility of their implementation at Van Oord.

1.7.2 Empirical Research: Case Study & Interviews

To form a detailed and practice-oriented understanding of how OKRs could function within Van Oord, a case study research strategy is used. This strategy aligns with realistic review methodology, which does not only seek to determine whether an intervention works but explores how and why it does (or does not) work within a specific context (Pawson et al., 2005).

Case Study Selection and Justification

The case study focuses on Van Oord's current asset-based, project-driven work structure and its collaboration with DigiShape, and the Ocean Health and Net Zero use cases. Van Oord operates with large-scale, long-term investments and technological innovations, managed by that have their own reporting and communication systems in place (Pers. Comm., 2024). Understanding how OKRs fit within this context requires an analysis of the alignment between strategic goals, operational execution, and knowledge management.

Interview Methodology

To assess the potential for OKR implementation and perceived benefits at Van Oord, semi-structured interviews are conducted with employees from various departments and management levels. By interviewing a diverse group of employees, the research ensures a comprehensive understanding of different perspectives within the organization.

This research employs a qualitative, practice-oriented approach, combining literature review, case study research, and semi-structured interviews to assess the feasibility of implementing OKRs at Van Oord. By understanding both theoretical success factors and practical organizational challenges, the study aims to provide actionable recommendations for effective OKR implementation, enhancing strategic alignment, knowledge-sharing, and operational efficiency at Van Oord.

2 Methodology

This chapter outlines the methodology used to investigate the added value and feasibility of OKR frameworks at Van Oord. It describes the design and execution of the systematic literature review, the structure of the qualitative case study, the approach to participant selection and data collection, and the thematic analysis used to interpret interview data. By combining theoretical research with empirical insights, the research uses a mixed qualitative design that supports both internal validity and external transferability.

2.1 Systematic literature review: Search Strategy and Working Method

A systematic literature review was conducted to investigate the preconditions for implementing OKRs in project-based organizations and the challenges that may arise during their adoption. The review is directly related to the first research question:

SQ1: What are the key drivers and best practices for OKR adoption in comparable organizations?

Given that OKRs originated in the software industry, this review explores their adaptation to non-software and project-based environments, comparable to marine engineering contracting firms. The goal is to examine the existing body of knowledge to determine relevant best practices, success factors, and potential barriers in contexts similar to Van Oord.

This section outlines the search strategy, inclusion and exclusion criteria, quality assessment procedure, and analytical approach used to extract relevant insights from academic literature. The methodology was structured in accordance with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, supported by the frameworks presented by Carrera-Rivera et al. (2022) and Silva & Santos (2024), to ensure transparency, reproducibility, and academic rigor.

2.1.1 Type of Review & Justification

A systematic literature review was chosen to ensure a structured, transparent, and reproducible approach to synthesizing knowledge on OKR implementation (Lame, 2019). Unlike conventional narrative reviews, a systematic approach enables a comprehensive and objective analysis of prior studies by defining explicit inclusion criteria, performing a structured search, and categorizing key themes (Nightingale, 2009). The SLR followed the PRISMA guidelines and was inspired by the methodological framework proposed by Carrera-Rivera et al. (2022), incorporating the PICOC structure to define scope and search relevance. Databases included Scopus, Web of Science, IEEE, and ScienceDirect. Scopus was selected and used as the primary database because it offers access to a wide range of academic papers that are peer reviewed. For completeness, the other mentioned databases were also searched. In total, 77 articles were initially screened, of which 21 met inclusion and exclusion criteria.

2.1.2 Framework: Structured Literature Selection Process

The review followed the two-phase process outlined by (Carrera-Rivera et al., 2022): Planning and Conducting. These stages guided the progressive refinement of the search results, from the initial identification of a broad set of articles to the inclusion of only those that were thematically and methodologically relevant to the research question. Figure 4 visually summarizes the adapted literature selection model used in this study.

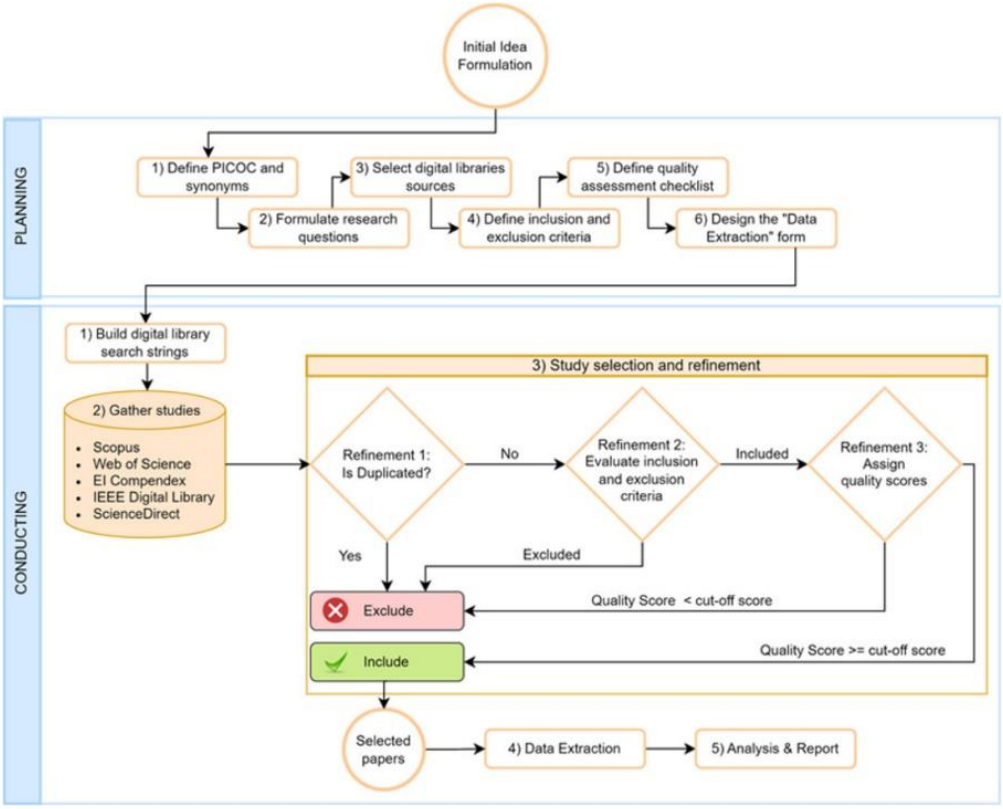

Figure 2: Literature selection graphical (adopted from Carrera-Rivera et al., 2022)

2.1.3 Search String and Database Selection

Given Van Oord's character as a technology-driven innovator, search terms were selected to reflect a broad and interdisciplinary scope. The keyword “OKR” was avoided due to its use as an acronym in unrelated fields. Instead, the search string “Objectives and Key Results” was used in full in each database. The amount of articles this resulted in was low enough to thoroughly scan, yet complete enough that no further search strings were needed. The search was conducted in the following databases: Scopus, Web of Science, IEEE Xplore and ScienceDirect. Due to access limitations, EI Compendex was excluded. Although Google Scholar and broader search engines were also explored, these were used mainly to cross-check grey literature rather than to fill the final dataset as they did not deliver any useful new papers.

2.1.4 Inclusion, Exclusion and Quality Criteria

Refinement 1: Duplication and abstract read

The refinement process was inspired by the criteria described in Silva & Santos (2024). The search expression "objectives and key results” (all fields) in the title, abstract or keywords was used in the selected databases. Usefulness was determined after reading the abstract; if the studies only mention OKRs but do not detail their application, or have an entirely different focus, they were found unuseful. Unfortunately there was no access to EI Compendex so this database was left out. Table 3 shows an overview of the databases that were used and the resulting amount of papers.

Database	Search String	Total Results	Useful Papers
Scopus	"objectives and key results”	48	26
Web of Science	"objectives and key results”	17	7
IEEE	"objectives and key results”	9	4
ScienceDirect	"objectives and key results”	3	0
EI Compendex	-	-	-
Duplicates Removed	-	-	11
Total	-	77	26

Table 3: Literature selection

Refinement 2: Exclusion Criteria
Inclusion and exclusion criteria were defined through preliminary searches and tests. Given the limited number of relevant studies, only one inclusion criterion (IC) was defined: after reading the abstract, the study must mention OKRs and their use directly in the methodology or results.

The exclusion criteria include:

- Studies not in English or Dutch;
- Duplicate studies;
- Unavailable studies;
- Studies that are not peer-reviewed.

Studies that were excluded based on these criteria:

Study Title	**Exclusion Criteria**
“OKR methodology: Challenges and trends”	Unavailable study
“A Model for Tracking Indicators and Achieving Goals Under an Agile Approach Using Scrum and OKRs”	Study not in English or Dutch
“Measuring seafarers' work performance at sea”	Unavailable study

Table 4: Studies excluded

Refinement 3: Quality Scores
To enhance the understanding of each study’s contribution, quality criteria were established (see Table 3). Studies were then classified and ranked based on the depth of their OKR discussion, distinguishing between those that only mention OKRs superficially and those that demonstrate some level of practical application.

Criteria	**Scoring**
In what way are OKRs mentioned?	0 - Only cited, no direct connection to the study; 0.5 - Mentioned but not directly related to the study focus; 1 - OKRs are a key focus of the study.
What is the type of study?	0 – The type of study is not explicitly described; 0.5 – article or report; 1 – Scientific journal article.
Does the study define OKR-related research objectives or questions?	0 - No; 1 - Yes.
Is there a clear connection between research objectives, execution, and results related to OKRs?	0 - No OKR focus at all or absence of results mentioning OKRs; 0.5 – There is a limited discussion of OKR-related results; 1 - Strong evidence linking objectives, execution, and results.

Table 5: Quality Scores

Studies excluded based on quality scores:

Study Title	Quality Score
“Objectives and key results”	1.0
“A study of factors that affect the self-practice of employees for the development of innovation capability of the Thai automotive industry”	1.5
“HR management efficiency factors and their impact on creation of a commercial innovative product”	1.0

Table 6: Studies Excluded

2.1.5 Identification of Guiding Questions
The review will identify its own research questions to categorize the findings based on themes that recur in the papers that can give useful insights. Keeping in mind that the research tries to describe

the *feasibility* of OKRs at Van Oord, the review will start with analysing what the reasons are why the observed organizations decide to implement OKRs. The Systematic Literature Review guiding questions are:

GQ1 - Reasons for OKRs: What drivers or motivations led to the need to implement OKRs?
This question explored the underlying organizational conditions for the adoption of OKRs. It sought to identify whether OKRs were implemented to solve issues such as lack of strategic alignment, inefficient performance tracking, limited transparency, or the need to support innovation and agile transformation. This question was useful to understand Van Oord's possible motivations for OKRs.

GQ2 - Challenges in OKR Implementation: What difficulties were identified?
This question investigated the practical and cultural obstacles encountered during OKR implementation. By identifying these barriers, this review provided Van Oord with foresight on potential risks and implementation barriers.

GQ3 - Success Factors: What practices supported successful OKR use?
This question focused on the enablers of successful OKR adoption. It examined what structural, managerial, and technological practices contributed to the sustained use and integration of OKRs. These insights can directly inform the design of an implementation strategy at Van Oord.

GQ4 - Results and Impact: What measurable outcomes were achieved?
This question addressed the effectiveness of OKRs in driving tangible improvements. It investigated how OKRs influence factors such as employee engagement, cross-functional collaboration, innovation, and alignment with strategic goals. For Van Oord, these metrics are essential to justify OKRs not just as a management tool, but as a performance-enhancing intervention.

GQ5 - Combination with Other Methods: Were OKRs introduced in combination with other goal setting or management methods?
This question explored the extent to which OKRs are integrated with other frameworks, such as Balanced Scorecards (BSC), Scrum, Agile, KPIs, or innovation pipelines. Understanding these hybrid approaches helps assess whether OKRs can complement or improve existing practices at Van Oord, rather than replace them entirely.

GQ6 - Relevance to Van Oord: To what extent are the findings transferable to Van Oord's marine engineering and innovation-focused operations?
This final question assessed the context of the reviewed cases and Van Oord's industry, structure, and innovations. It filtered the literature for lessons that can be adapted to Van Oord's ambition to integrate OKRs in a technically complex environment.

These questions address the what, why, and how of OKR implementation, with an emphasis on applicability to Van Oord's goals and structure. They were derived from prior research on performance management systems, goal-setting theory, and organizational change. The questions were refined through an iterative process of screening academic literature.

By analysing these aspects, the review aims to provide a foundational understanding of how OKRs have been applied in various contexts and whether they could be feasible for a project-based organization like Van Oord. The findings were compared with empirical data from interviews with Van Oord employees to assess the alignment between theory and practice.

Insights were coded thematically using a matrix table that can be seen in Appendix B: SLR Findings, aligning each paper's contributions with one or more guiding questions. The final themes were refined and standardized to support comparison across studies, and results are presented in tabular format in the next chapter.

2.2 Qualitative case study

To explore the feasibility of OKRs in a real-world setting, a qualitative case study was conducted at Van Oord. A nested case design was used, with Van Oord as the overarching case and three subunits of analysis: Ocean Health, Net Zero Emissions, and Digishape. The use cases were selected based on their strategic relevance, the availability of respondents, and the current reporting systems in place.

Ocean Health was included in the case study because this use case has a very clear connection to the strategic vision of Van Oord (empowering nature and communities), the size of the initiative (+- 30 people) that makes it manageable to introduce a new goal-setting method, and the fact that they have already started piloting the use of OKRs with monthly workshops and self-developed OKR templates. An exploratory

Net Zero Emissions was selected because this use case plays a very important role in Van Oord's sustainability strategy, covering one of the four pillars of sustainability. In addition, the use case has a fragmented and decentralised reporting and progress-tracking structure leading to common problems such as a lack of: overview, decision-making and strategic alignment. Because of these challenges. many respondents were eager to participate in the research, hoping that OKR frameworks could address them.

Finally, DigiShape was selected because of its organisational structure or lack thereof, and the potential OKRs might have to improve it. Besides that, DigiShape offered a platform whose stakeholders have widely different views and interests, as well as different levels of commitment, so examining the potential for OKRs to align all partners to strategic vision made for an interesting use case. The participants representing DigiShape were all part of the core team. The first interview was conducted with the instigator and the supervisor at Van Oord, who gave recommendations about further participants.

This design allowed for both in-depth understanding of local context and comparison across use cases. Data was collected through semi-structured interviews with employees working directly within or alongside these use cases.

2.2.1 Participant Selection

A total of 11 participants were interviewed across the three selected use cases: Ocean Health, Net Zero Emissions, and Digishape. Convenience sampling was used to identify participants, primarily based on their accessibility and involvement in strategic or operational aspects of these initiatives. This led to the addition of two participants from other departments: IT and Procurement. While this approach limits the generalisability of the findings, it was appropriate given the nature of the study and the position of the researcher within the organisation.

To ensure a range of perspectives, participants were drawn from various hierarchical levels, including senior managers, discipline leads, and project employees. This diversity allowed for reflection on how OKRs might influence different organisational roles and decision-making processes. All participants were directly or indirectly involved in goal-setting, coordination, or reporting within their respective domains, making their insights relevant to the research questions.

2.2.2 Overview participants

Table 7 shows an overview of the participants of the interviews, explaining their seniority level, their role, the initiative they are active in and their gender. The seniority level was not directly asked in the interviews but could be deducted based on their role or was found by accessing Van Oord's Teams environment showing the organisation's hierarchy. In this research it was assumed that gender classification does not have any influence on the contents of the interviews or on the interpretation of the results, however, in a heavily male dominated business (such as marine engineering) it is important to include females (Arulnayagam, 2020).

Participant ID	Seniority	Role	Initiative	Gender
A	Middle Management	Team lead/ Specialist	Net Zero	M
B	Senior Management	Project Manager	Net Zero	M
C	Middle Management	Category Manager	Net Zero	M
D	Middle Management	Team Lead Energy & Emissions	Net Zero	F
E	Graduate	Thesis Intern CSRD	Other	F
F	Owner/Founder	Instigator	DigiShape	M
G	Middle Management	Core Team	DigiShape	M
H	Owner/Founder	Core Team	DigiShape	M
I	Middle Management	Core Team	DigiShape	M
J	Medior	Environmental Engineer	Ocean Health	F
K	Medior	Agile Enabler	Other	M

Table 7: Participant overview

2.2.3 Interview Protocol

Semi-structured interviews were conducted, allowing for both consistency across core questions and flexibility to explore participant-specific insights. Each interview lasted approximately 45-60 minutes and was conducted either in-person or virtually, depending on participant availability and preferences. Each interview was conducted using a semi-structured protocol designed to explore participants' perspectives on goal-setting, current reporting practices, and the potential relevance of OKRs within their specific organizational context. Interviews began with a brief personal introduction and a clarification of the participant's role, followed by a short explanation of the study's objective and an overview of the OKR framework. This included an example of a well-formulated OKR to ensure all respondents, regardless of their prior knowledge, shared a common understanding. This introduction lasted approximately three minutes and served to establish a consistent baseline across interviews.

The interview itself was organized into three main sections. In the first part, participants were asked about the strategic vision and the activities of their use case, and how it connects to the broader organizational mission. They were also encouraged to describe how progress is currently measured and communicated within their team or area of responsibility. The second section shifted focus to a specific project or subdomain, leading to a more detailed discussion of concrete deliverables, timelines, reporting tools, and coordination methods. In the final section, participants were invited to reflect on the potential application of OKRs in their work environment, including perceived benefits, anticipated challenges, and preferences for how such a framework might be introduced or piloted.

In the last question, respondents were asked to formulate their own OKRs based on the example they were shown in the beginning. The goal of this question was twofold; first to test the capacity of a respondent to understand and actually implement the process of writing OKRs, and secondly to monitor the response of the interviewee to engaging with OKRs. A follow-up question was often directed at their experience of defining OKRs. The answers were later used by the researcher to write complete OKRs for each respondent, leading to a table overview of 11 OKRs which allowed for a comparison and discussion of a person's ability to learn OKRs in a relatively short time span.

This interview protocol was designed to find a balance between consistency across cases and openness to individual insights. It enabled both thematic comparisons and context-specific depth. The structure was informed by themes drawn from the literature and refined through discussions with supervisors and pilot interviews to ensure that it was both conceptually clear and practically relevant.

An interview guide was used to make sure all important questions are covered while allowing for follow-up questions to explore participant-specific experiences and perspectives. The full set of interview questions can be seen in Appendix A.

2.2.4 Transcription process

All interviews were conducted and recorded using Microsoft Teams, with the prior consent of participants. The recordings were used to create literal transcripts, only leaving out filler words, which formed the basis for the thematic analysis. Transcripts generated by Microsoft Teams were corrected manually by the researcher within a few weeks of each interview, ensuring high familiarity with the content while preserving contextual accuracy. Non-verbal cues were excluded to maintain focus on spoken content.

To protect participant privacy, all transcripts were anonymized, and identifying details were removed. The full set of transcripts was securely stored in accordance with TU Delft's ethical research guidelines. In addition to the audio recordings, Microsoft Teams provided AI-generated summaries and meeting notes. These AI notes were used selectively to support the descriptive parts of the results section, such as the use cases and existing reporting systems.

2.2.5 Research ethics

Ethical approval was sought before conducting the interviews. Participants were provided with an information sheet detailing the study's purpose, their rights, and how their data was used. Informed consent was obtained prior to participation. All interviews were audio-recorded (with participant consent) and transcribed for analysis. Anonymity and confidentiality was maintained, with all identifying information removed from transcripts and reports. Data was securely stored and accessible only to the researcher. Company names were used only in the case of interviews related to DigiShape. The raw data (recordings and meeting notes) will not be published. Instead, only meta data will be published along with the thesis. All collected data was stored on the secured OneDrive cloud environment provided by TU Delft. Communication with interview candidates and colleagues

was done via Microsoft Teams and Outlook accounts provided by Van Oord, which are also strictly secured and can only be accessed by the primary researcher.

2.3 Data analysis

To analyse the data in a structured way, (qualitative) deductive thematic analysis were used. Deductive thematic analysis is a way to test hypotheses and existing theories in a new environment (Delvetool.com, 2024; Kibiswa, 2019). Transcribed interviews were coded using software Atlas.ti that lead to concepts, patterns and larger themes that occur throughout the data. These findings were then reviewed and defined so that they can be interpreted and discussed in the results section. The finalized transcripts were anonymized to protect participant identity and then uploaded into Atlas.ti, a qualitative data analysis software. A colour-coded system was used to apply deductive thematic coding, based on categories derived from the research questions and literature review. This process allowed for structured comparison across interviews and use cases, and supported the identification of recurring themes and divergences in perception. Thematic analysis followed the six phases of thematic analysis as defined by Braun & Clarke (2006) that can be seen in figure 1.

Phase	Description of the process
1. Familiarising yourself with your data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Figure 3: Phases of Thematic Analysis (Braun & Clarke, 2006).

An initial codebook was developed using categories derived from both the literature review and the research questions. This deductive base was refined during the first round of coding, as new sub-themes and cross-cutting insights emerged. Coding followed an iterative process. Transcripts were reviewed line-by-line and coded in reference to both predefined categories and emergent patterns. The codes were then clustered into broader themes aligned with the guiding questions. Interpretations were validated through a second reading and cross-checking across the three case contexts.

In the synthesis section of the results, the quotes connected to the coding scheme shown in figure 2 were extensively used to explain the perceptions of the respondents, describe overarching themes and incorporate real-life examples experienced or mentioned by the respondents on the work floor.

2.3.1 Initial coding scheme

The initial coding framework was based on the process of conducting the interviews and reading the first versions of the interview transcripts. At the same time, themes emerging from the research objectives, preliminary interview findings and the themes discussed in the systematic literature review were kept in mind when writing and categorizing the codes. The coding scheme is structured in a hierarchal way, with four main categories (parent codes) and sub-themes (child codes). The following diagram shows a visual representation of the categories and codes that were used in the coding progress, along with the most important connections between them.

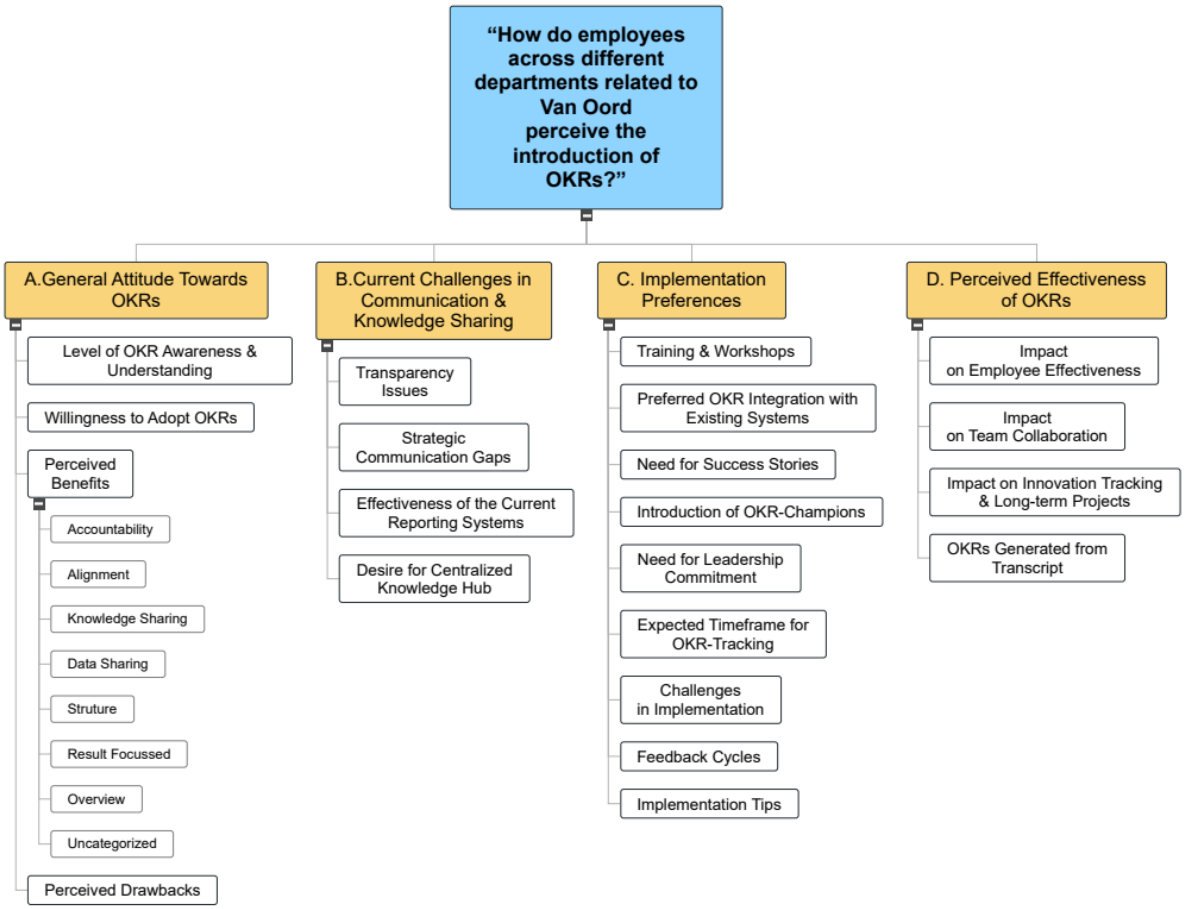

Figure 4: Diagram of Coding Scheme

This methodological approach allowed the research to connect abstract theoretical insights with grounded, context-specific observations. By combining a structured review of existing knowledge with an exploratory case study design, the study provides both conceptual understanding and practical insight into the potential of OKRs at Van Oord.

2.3.2 Use of AI Tools

During the writing and analysis process, AI-supported tools were used to enhance productivity, improve clarity, and support critical reflection. OpenAI's ChatGPT (GPT-4) was employed primarily for three purposes: (1) to provide writing feedback and editorial suggestions, (2) to assist in restructuring sections for coherence and flow, and (3) to reflect on emerging findings and thematic connections within the qualitative data. These uses were especially helpful in formulating academic language, finding interconnections from interview transcripts, and improving consistency across chapters.

Importantly, AI was not used to generate original research content, formulate interview questions, or perform coding in Atlas.ti. All transcripts were manually reviewed and coded by the

author, and empirical interpretation was based done by the author. AI was used only as a supporting tool and never as a replacement for critical thinking, domain knowledge, or academic judgment.

All decisions regarding the content, structure, and argumentation of this thesis were made by the author. The use of AI tools was conducted in accordance with TU Delft's guidelines on academic integrity and transparency, and all AI-generated outputs were critically reviewed before integration into the final thesis.

2.4 Validation and Credibility of the Research

Validation concerns the overall credibility and reliability of the research process, encompassing both how data was gathered (internal validity) and the extent to which findings can be generalized or applied to other contexts (external validity or transferability). Following the framework proposed by Verschuren and Doorewaard (2010), this section outlines how both forms of validity were addressed throughout the study.

2.4.1 Internal Validity – Case Study and Interview Design

This research used a nested case study design, focusing on three relevant use cases: Ocean Health, Net Zero, and Digishape. These cases were selected to capture diverse organizational contexts while maintaining relevance to the overarching research question. Semi-structured interviews were used to ensure a balance between depth of insight and consistency across cases. All interviews were conducted and recorded via Microsoft Teams, then transcribed by the researcher within two weeks. This short interval between interview and transcription helped maintain familiarity with the data and reduced the risk of transcription errors.

To cross-check the accuracy of descriptions related to use cases and reporting systems, summaries and notes generated by Microsoft Teams were used to complement the transcripts. However, all direct quotes were drawn exclusively from the transcribed data, which were uploaded into Atlas.ti and coded using a structured codebook. The coding process followed Braun and Clarke's (2006) six-phase approach to thematic analysis and was refined through several iterative rounds to enhance reliability and interpretive depth.

Different sources were used to validate themes across the three use cases and ensure consistency between the interview data and other sources, including internal strategy papers and publicly available documents and webpages. Although formal member checking was not conducted due to time constraints, interpretations were informally validated through conversations before and during the interviews.

2.4.2 Construct Validity and Transferability

The identification of themes and OKR-related challenges was grounded in both the empirical case data and insights from the literature. To ensure construct validity, emerging themes were compared against categories identified in the systematic literature review, such as drivers, success factors, and potential barriers to OKR implementation. This comparison helped to align empirical findings with established theoretical concepts, strengthening the overall robustness of the analysis (Van de Ven, 2007). Using a consistent interview protocol across all three cases allowed for thematic comparison across different organizational contexts. During the coding process, overlapping or ambiguous codes were refined several times to maintain clarity and consistency.

While this study is executed in the specific context of Van Oord, many of the identified themes, such as ownership, challenges in reporting, and the need for strategic alignment, are relevant to other asset-based, project driven organizations. The selection of a diverse use cases, including both internal departments and an external collaboration platform, improves the potential transferability of the findings. These insights may be particularly relevant to firms operating in sectors like infrastructure, marine engineering, or renewable energy.

3 Systematic literature review

3.1 Results

This section presents the findings of the systematic literature review, which analysed 21 peer-reviewed academic publications on the design, implementation, and impact of OKRs. This review addresses the following sub question SQ1:

> *"What are the key drivers and best practices for OKR adoption in comparable organizations?"*

The majority of reviewed studies focus on innovation-driven or agile environments and offer a broad spectrum of insights that may be relevant to marine engineering organizations. The themes presented below reflect both common patterns and divergences across the literature, supported where appropriate by illustrative quotes or case-specific observations. This synthesis forms the empirical foundation for assessing the potential feasibility of OKRs at Van Oord. Table 7 gives a table overview of the papers that were analysed:

Reference	Area or Industry	Method	Focus
(Al-Saadi et al., 2023)	Higher Education Institution (HEI) in Oman	Interviews	OKRs as a performance appraisal system
(Trinkenreich et al., 2019)	IT department in large global mining company	Case study	GQM+Strategies
(Vedal et al., 2021)	Large-Scale Agile software development agency	Interviews	Agile methods
(Lertladaluck et al., 2023)	Undergraduate students in Thailand	Case study	Personal goal-setting
(Klanwaree & Choemprayong, 2019)	IT consulting organization in Bangkok, Thailand	Case study	OKRs for active knowledge sharing
(Zasa & Buganza, 2023)	9 different organizations working Agile	Interviews	Developing shared vision
(Gonçalves et al., 2024)	Theoretical framework developed	Review	AI-driven OKRs
(Criado et al., 2024)	Comparative and retroactive analysis of MBO methods	Survey	OKRs vs MBO
(Rompho, 2024)	Comparison of 26 organizations	Interviews	Performance measurement
(Rompho & Truktrong, 2024)	Comparison of 54 organizations	Interviews	Collaboration & Innovation
(Stray et al., 2022)	Large Norwegian public agency	Case Study	Agile teams
(Kunrath et al., 2022)	IT company developing ERP software	Design Science	GOAL-OKR framework
(Silva & Santos, 2023)	Cross-industry, mostly IT, software development and business management	Literature review	Difficulties, benefits, and lessons
(Trieflinger et al., 2020)	Software-intensive businesses	Literature review	Stakeholder alignment
(van Erp & Rytter, 2023)	Manufacturing systems companies	Case study	Digital and circular transition
(Morales-Gonzalez et al., 2024)	Education setting with tech-industry professionals	Interviews	Cybersecurity
(Butler et al., 2024)	Global software engineering teams	Interviews and surveys	Goal setting and tracking
(Oner et al., 2024)	Digital transformation in a plastic injection manufacturing firm	Case study	Decision models
(Sowkasem & Kirawanich, 2021a)	Software development for a railway project	Case study	OKR and scrum combination
(Herkenrath et al., 2023)	Cross-sector; focus on organizations struggling with OKR implementation	Literature review	Effective OKR implementation

Table 7: Selected studies overview

The studies span various industries, including technology, consulting, healthcare, education, and public administration, and include both qualitative and quantitative research approaches. The findings are synthesized around five thematic categories derived from the guiding questions introduced in the previous section. Appendix A: SLR Findings presents these findings in a clear overview. After this schematic overview of the findings per category follows the synthesis of the SLR, where the findings are explained supported by quotes and examples.

3.1.1 Perceived and observed results of OKRs

One of the most consistent themes across the reviewed literature is the role of OKRs in improving strategic alignment. Many organizations implemented OKRs to address a gap between high-level strategic objectives and operational execution. In higher education, information technology, and agile software development settings, OKRs were seen as a mechanism to cascade strategic goals throughout all levels of the organization(Al-Saadi et al., 2023; Trinkenreich et al., 2019; Vedal et al., 2021). These findings align with broader critiques of traditional goal-setting frameworks, such as KPIs and MBOs, which often fail to maintain coherence between organizational strategy and individual performance (Rompho, 2024; Rompho & Truktrong, 2024).

A second prominent driver for OKR adoption is the need for greater transparency and accountability. Several studies reported that traditional performance measurement systems were perceived as opaque, rigid, or insufficiently collaborative. OKRs, by contrast, were viewed as a tool to enhance visibility across teams and departments and to promote shared ownership of outcomes (Butler et al., 2024; Vedal et al., 2021). In Butler's paper, the shift to OKRs was explicitly described as a response to *"goal-setting fragmentation"* and a lack of cohesion in distributed, cross-functional teams. Similarly, in the case of Stray, OKRs were introduced in response to concerns about unclear direction and poor coordination among departments.

The literature also reflects a desire to improve measurement quality and to move away from purely output-based metrics. Organizations sought to use OKRs to translate qualitative goals into measurable outcomes. For instance, Kunrath et al. emphasize that *"directly measuring this goal is a difficult task… it is necessary to create indicators,"* explaining the need for frameworks like OKRs that support structured translation of strategy into execution. This aligns with broader interest in performance systems that balance aspirational and practical components.

A further reason identified across several studies is the increased demand for adaptability and innovation. OKRs were often introduced as part of digital transformation efforts or to create a more agile, feedback-driven culture (Morales-Gonzalez et al., 2024; Oner et al., 2024; Rompho & Truktrong, 2024). In such settings, the framework was valued for supporting iterative goal-setting and encouraging experimentation. In Rompho & Truktrong (2024), both executives and employees reported that OKRs encouraged idea-sharing and open dialogue around performance expectations - qualities that were previously lacking in more hierarchical environments.

In addition, OKRs were often seen as a way to address the limitations of incentive-linked performance systems. Rather than tying goals to compensation, many organizations used OKRs to focus on learning, development, and shared responsibility. As one study put it*, "OKRs allow employees to set their own goals and do not tie themselves with rewards, as in traditional performance measurement systems"* (Rompho, 2024). This decoupling was found to reduce internal competition and support a more collaborative organizational culture.

Finally, a few studies reported that OKRs were adopted simply because of their popularity in high-profile companies like Google, Amazon, or Intel (Silva & Santos, 2023). While this bandwagon effect was not always accompanied by careful consideration of contextual fit, it nonetheless reflects the growing influence of OKRs as a perceived best practice.

The reviewed literature presents a wide spectrum of reported outcomes following the implementation of OKRs, ranging from improved strategic alignment and team motivation to greater transparency and adaptability. While the majority of studies emphasize positive organizational impacts, several also highlight limitations and risks, especially when implementation is rushed or unsupported by structural and cultural enablers.

One of the most commonly reported outcomes is improved strategic alignment across organizational levels. In Vedal et al. (2021) and Trieflinger et al. (2020), OKRs helped ensure that teams understood how their objectives contributed to broader strategic goals. In one case, OKRs *"clarified their contributions to the organization's success,"* leading to a stronger sense of ownership among team members. In Trieflinger et al. (2020), the integration of OKRs helped ensure that *"product activities [were] focused towards institutional objectives, while fostering transparency across different levels of the company."*

Several studies report a remarkable increase in transparency and visibility. Sowkasem & Kirawanich (2021) describes how OKRs improved *"collaboration visibility and prioritization clarity,"* while Stray et al. (2022) and Butler et al. (2024) show that visibility into other teams' goals enhanced cross-team awareness and coordination. The removal of direct financial incentives, highlighted in Rompho (2024), was found to reduce performance gaming and encourage genuine engagement: *"OKRs are not used as a system to reward or punish employees, but rather to allow employees to understand how their work supports the organization."* This shift was associated with greater psychological safety and collaboration.

In terms of decision-making and agility, studies noted that the use of structured check-ins and iterative feedback loops helped organizations respond more flexibly to changing circumstances. Van Erp & Rytter (2023) illustrates how OKRs enabled *"a clear structuring of objectives"* in a complex design and implementation project, bridging physical and digital systems. Similarly, Rompho & Truktrong (2024) emphasizes the role of OKRs in fostering early detection of implementation issues and supporting goal updating across project cycles.

The impact of OKRs on employee motivation and engagement was frequently emphasized. Silva & Santos (2023) found that both executives and operational staff *"concurred that OKRs facilitate better alignment of measurements with organizational strategies… leading to increased intrinsic motivation."* In the education sector, Morales-Gonzalez (2024) reported that *"10 of 11 students agreed that feedback given during their work to achieve their objective... was helpful,"* and that OKRs *"facilitated early and ongoing discussions,"* improving course tailoring and learning outcomes.

Nonetheless, several studies caution that the benefits of OKRs are not guaranteed. Rompho (2024) warns that while *"OKRs can help solve the three performance measurement problems… this does not mean that OKRs will work well in every organization."* Herkenrath et al. (2023) echoes this concern, observing that many companies *"fail in its implementation and... abandon the method"* due to incomplete frameworks and insufficient follow-through.

In summary, the results across studies demonstrate that OKRs can generate significant organizational benefits - particularly in alignment, transparency, agility, and engagement - when introduced with the right support. However, these outcomes are highly dependent on contextual variables such as leadership, communication structures, and cultural readiness.

3.1.2 Challenges Encountered During Implementation

While OKRs are widely recognized for their potential to improve alignment and accountability, the reviewed literature also surfaces a broad range of challenges associated with their implementation. These challenges span cultural, technical, and procedural dimensions and underscore the importance of contextual fit and organizational readiness.

A frequently reported issue is resistance to change, particularly in organizations transitioning from traditional performance appraisal systems. In the case of a higher education institution, faculty members expressed discomfort with the increased emphasis on measurable outcomes, fearing it might overlook qualitative aspects of their work (Al-Saadi et al., 2023). This resistance was compounded by perceptions of "subjectivity in appraisals" and scepticism about whether the framework could be applied fairly.

Closely related is the problem of insufficient training and lack of clarity. Several studies report that employees and managers alike lacked the knowledge or skills required to effectively formulate and track OKRs. In Al Saadi (2023), the absence of structured training led to poorly defined objectives and inconsistent practices. Stray et al. document similar confusion*: "Teams didn't know whether OKRs were for reporting, prioritizing, or measuring team progress."* This ambiguity resulted in "an incredible amount of energy to formulate objectives and k0ey results in the right way," with outcomes either too vague or too prescriptive - rarely finding a useful middle ground.

A third major challenge lies in the difficulty of defining good OKRs. Many organizations struggled with setting goals that were both ambitious and measurable. As noted in Butler et al (2024*), "Creating and setting OKRs was by far the most reported challenge,"* with issues including arbitrary targets, forced measurability, and a difficult shift from output-based to outcome-based thinking. This struggle was especially acute in environments lacking a culture of continuous feedback or data-informed decision-making.

Tool fragmentation and process overload further complicated implementation. In Butler et al. (2024), a large global software firm reported using *"12 different tools… for OKR tracking,"* leading to confusion and inconsistent practices across teams. Additionally, weekly OKR reviews, though well-intentioned, were seen as *"logistically demanding,"* particularly in mixed-experience environments like classrooms or large-scale engineering projects (Morales-Gonzalez et al., 2024; Oner et al., 2024).

Cultural mismatch and organizational silos also posed significant barriers. Some teams focused solely on their own objectives, neglecting interdependencies with others. As Trieflinger et al. (2020) reports*, "Each department identifies and pursues its own goals... individual goals are often placed above corporate goals."* In Silva & Santos (2023), the lack of shared understanding resulted in *"confusion and lack of understanding... focusing only on their own goal without attention to others' goals."* These fragmented approaches undermined the core purpose of OKRs: alignment across units.

Leadership behaviour emerged as a critical variable. Silva&Santos (2023) notes that "OKR requires managers who act more as facilitators… an authoritarian and non-participatory management style may face more resistance." In cases where top-down leadership dominated, teams were less likely to engage meaningfully with the OKR process. Similarly, Butler et al. (2024) describes how frequent shifts in leadership priorities led to "priority confusion," weakening trust in OKRs as stable planning tools.

Several studies highlighted incomplete implementation frameworks as a key obstacle. Herkenrath et al. (2023) concludes that *"none of the OKR frameworks cover all PMS implementation success criteria."* Most existing models emphasize goal-setting and KPI development but *"neglect planning and reporting phases."* As a result, organizations often lack a comprehensive, end-to-end approach to rolling out OKRs effectively.

Finally, some studies reported outright failure in early OKR cycles. In Stray et al. (2022), *"none of the OKRs were completed in the quarter"* following initial implementation, revealing the need for better onboarding and clearer communication of purpose. Kunrath et al. (2022) notes that *"some OKRs did not pass the performance test… particularly related to the objectives of the innovation process,"* illustrating the challenges in aligning strategic goals with real business constraints.

In summary, while OKRs offer a promising approach to performance management, their success depends heavily on organizational context, leadership style, training, and communication. The studies reveal that without these enablers, OKRs can become just another layer of complexity - misunderstood, misused, and eventually abandoned.

3.1.3 Success Factors and Enabling Conditions

While the implementation of OKRs presents numerous challenges, the literature also identifies several success factors that contributed to effective adoption. These enabling conditions can be broadly categorized into leadership engagement, structural support, cultural alignment, and integration with existing methods.

A recurring theme is the importance of stakeholder engagement and leadership buy-in. In multiple cases, leadership played a critical role in legitimizing the OKR process and facilitating alignment across departments. For instance, in Trinkenreich et al. (2019), frequent brainstorming sessions between IT directors and team managers ensured buy-in and coherence. emphasizes that *"the participation of leadership... and awareness of all hierarchical levels help in the involvement and alignment."* Butler et al. (2024) further underscores that middle management is crucial, noting that "more than 50% of managers reported they are not very effective at translating OKRs… into actionable goals," pointing to the need for targeted training and support at this level.

Training and capacity-building initiatives also emerge as essential success factors. Across several studies, the adoption of OKRs was supported by workshops, mentoring programs, and tool-specific training. Silva & Santos (2023) calls training *"the most recurrent best practice,"* while van Erp & Rytter(2023) describes the establishment of defined roles - such as program leads, coaches, and owners - along with clear review cycles as foundational to implementation success. In educational settings, Morales-Gonzalez (2024) notes that subject matter experts (SMEs) acted as peer mentors, helping students learn from real-world experiences. Feedback loops and retrospectives in this context *"proved effective in eliciting insights into individual progress and challenges."*

Another key enabler is the existence of regular feedback and review cycles. These mechanisms support continuous adaptation and learning, reinforcing alignment and preventing stagnation. Trinkenreich et al. (2019) illustrates how consistent feedback helped employees stay on track and make timely adjustments. Rompho & Truktrong (2024) reports that by removing OKRs from compensation systems, organizations encouraged collaboration and risk-taking: *"Employees are more willing to help each other because they did not need to be graded against each other."*

OKRs were also found to enhance innovation capacity when decoupled from rigid reward systems. In Rompho & Truktrong (2024), 74% of executives and 52% of operational staff stated that

OKRs supported innovation, with respondents noting that the system was *"open to experimentation,"* and *"we can learn from failures and successes that lead to innovation."* However, this required psychological safety and cultural alignment, which not all organizations possessed.

Remote and distributed teams reported particularly strong outcomes. Butler et al. (2024) notes that *"location outside of the main office was positively correlated with higher OKR maturity,"* suggesting that digital workflows and asynchronous collaboration may lend themselves well to structured goal-tracking practices. These teams also demonstrated higher engagement and lower turnover intent.

Several organizations succeeded by adopting their own hybrid implementation models, blending bottom-up autonomy with structured top-down oversight. In this regard, OKRs are a tool that can be implemented in many ways – depending on the specific organisational needs. In Stray et al. (2022), the OKR process initially began informally at the team level and gradually evolved into a "more structured top-down hierarchy for alignment." This combination preserved team-level ownership while ensuring consistency and direction.

Some studies highlight the effectiveness of integrating OKRs with existing strategic tools. Trinkenreich et al. (2019) reports the successful use of GQM+Strategies alongside OKRs to define measurable goals and prioritize initiatives. Criado et al. (2024) similarly demonstrates how OKRs were used not only for business outcomes but also for personal development, which increased motivation and ownership. Tool standardization and communication transparency were also found to be vital. In Butler et al. (2024), the successful rollout of OKRs depended on *"training for managers and OKR leads, standardized tooling, transparent communication, and cross-team mentoring."* Dedicated tools, such as custom OKR dashboards or Slack integrations, helped maintain visibility and engagement across distributed teams.

The literature also includes process innovations and role definitions that improved outcomes. For example, Sowkasem & Kirawanich (2021) describes a tightly integrated approach in which OKRs were embedded into every stage of Scrum: sprint planning, daily standups, reviews, and retrospectives. Similarly, in Oner et al. (2024), a structured evaluation process based on the Smart Industry Readiness Index (SIRI) helped ensure that the OKR strategy matched organizational capabilities. *"Digital transformation requires selecting the right strategy,"* the study notes, and OKRs were positioned as one piece of a broader strategic portfolio.

Taken together, these findings emphasize that successful OKR implementation relies not only on the framework itself but also on the broader ecosystem in which it is introduced. Effective rollouts are marked by strong leadership, inclusive participation, training and mentoring, feedback mechanisms, and the ability to adapt OKRs to existing workflows and strategic tools. Without these enabling conditions, the promise of OKRs may remain unrealised.

3.1.4 Integration with Other Management Frameworks

Many organizations did not adopt OKRs in isolation but instead implemented them alongside or within existing management frameworks. The literature reveals a variety of combinations, including OKRs with KPIs, MBO, Agile methodologies, and strategic planning tools such as SWOT and the Balanced Scorecard. These integrations were often pursued to enhance the adaptability, precision, and strategic coherence of OKR systems.

A recurring pattern across several studies is the parallel use of OKRs and KPIs. For instance, in Rompho (2024), OKRs were used to boost strategic focus and autonomy while KPIs continued to measure operational performance. However, this coexistence was not without problems. *"Some organizations continued to use KPIs alongside OKRs," leading to "confusion among employees"* due to overlapping or conflicting goal structures. Rompho (2024) concludes that mixing OKRs with traditional indicators can *"undermine the benefits"* of both frameworks, particularly when clarity and consistency are not maintained.

In other cases, OKRs were used to replace or modernize older systems. Criado et al. (2024) documents how OKRs were retrofitted into an organization's MBO model, with the goal of enhancing employee satisfaction and participation. Meanwhile, Zasa & Bugansa (2023) explicitly discusses how OKRs were introduced as a replacement for MBO to address challenges related to transparency and engagement, noting that the shift was most effective when accompanied by leadership commitment and iterative learning cycles.

Integration with Agile methodologies was another common theme, particularly in IT, software development, and engineering contexts. Several studies noted that OKRs were aligned with Scrum or Kanban workflows. In Sowkasem & Kirawanich (2021), OKRs were embedded into all stages of the Scrum cycle: from sprint planning (objective setting), to daily standups (KR progress updates), to retrospectives (performance scoring). This integration helped ensure continuous alignment between delivery processes and strategic goals. Similarly, Morales-Gonzalez (2024) reported that *"Scrum and OKRs received favourable responses, with weekly sprints... assisting students in staying on track without strict deadlines."*

In more complex and transformation-driven environments, OKRs were combined with multiple strategic frameworks. Oner et al. (2024) illustrates the use of OKRs in combination with the Balanced Scorecard (BSC), SWOT, TOWS, and the Simple Fuzzy Analytic Hierarchy Process (SFAHP) to create a balanced and robust decision-making structure. The authors argue that this blended approach enabled *"clarity, transparency, and adaptability"* during a digital transformation initiative in the manufacturing sector.

Further support for integration comes from Van Erp & Rytter (2023), where OKRs were implemented within a "DesOps" framework - a design-operations model inspired by Agile principles. Here, OKRs acted as the project management layer, providing strategic direction and facilitating iteration. Likewise, in Silva & Santos (2023), the combination of OKRs and GQM+Strategies (Goal-Question-Metric) was seen as a way to compensate for weaknesses in the OKR model by offering a structured pathway from goals to measurable actions: *"GQM+Strategies helps solve some processes where OKR is seen as deficient… guiding deriving initiatives (strategies) to achieve objectives."*

Finally, several studies emphasized the value of digital tools and cross-functional rituals to support integrated OKR systems. In Stray et al. (2022), teams used *"tools like Miro, Slack, and a custom OKR tracker"* to visualize progress and foster friendly competition. Butler et al. (2024) documented the use of dashboards that *"enabled transparency and friendly competition among teams,"* enhancing visibility and motivation across remote teams.

In summary, the reviewed studies suggest that OKRs often function best not as a standalone framework, but as part of a wider performance and strategy ecosystem. Successful integrations are characterized by thoughtful alignment between frameworks, consistent communication, and supportive tooling. Poorly managed combinations, by contrast, risk diluting the clarity and focus that make OKRs effective.

3.1.5 Insights systematic literature review

The findings of the systematic literature review provide important insights for evaluating the feasibility of OKRs at Van Oord. Although most of the studies reviewed are situated in industries such as software, manufacturing, education, and public administration, many of the observed dynamics - particularly those concerning organizational complexity, stakeholder coordination, and performance alignment - are directly relevant to a project-based engineering contractor like Van Oord.

A key insight is that strategic alignment and cross-departmental coherence, two of the primary challenges faced by Van Oord, are among the most common reasons for OKR adoption across sectors. OKRs have repeatedly been used to clarify expectations, create transparency, and ensure that individual and team efforts are connected to organizational objectives (Al-Saadi et al., 2023; Trinkenreich et al., 2019; Vedal et al., 2021). These goals closely reflect Van Oord's strategic ambitions, particularly around innovation, cross-functional collaboration, and the alignment of long-term goals with daily execution.

However, the review also highlights substantial implementation risks that Van Oord must anticipate. Many organizations experienced difficulties with unclear OKR definitions, overlapping frameworks, and inconsistent tooling—challenges that could be exacerbated in an organization with complex, large-scale operations and distributed teams. Butler et al. (2024) reports on fragmented OKR rollouts caused by inconsistent tool use and a lack of standardization, while Stray et al. (2022) and Rompho & Truktrong (2024) describe how misaligned priorities and ambiguous goal structures created resistance and disengagement.

To avoid these pitfalls, Van Oord should focus on enablers consistently associated with successful OKR adoption. These include:

- Strong leadership engagement at multiple levels;
- Training and capacity-building for both managers and employees;

- Iterative review cycles to adjust goals and ensure relevance;
- Transparent communication across project teams;
- Integration with existing systems such as Agile workflows and strategic reporting tools.

Importantly, several studies recommend a phased approach to implementation, starting with pilot departments and gradually expanding as internal maturity develops (Butler et al., 2024; Herkenrath et al., 2023). This would allow Van Oord to test OKRs in a controlled setting - such as within innovation-focused or cross-disciplinary project teams - before scaling across the wider organization.
Cultural alignment is another critical factor. Rompho & Truktrong (2024) and Silva & Santos (2023) note that OKRs work best in organizations that foster autonomy, shared accountability, and open communication. Given Van Oord's strong engineering culture and decentralized operations, OKRs must be introduced with sensitivity to project timelines, team interdependencies, and individual ownership structures. One study explicitly states: *"OKRs do not come without problems… but if implemented properly, they can help resolve key performance management issues"* (Rompho, 2024).

Finally, the review explains that OKRs can be adapted to suit hybrid frameworks. For Van Oord, this suggests that the framework should not replace current practices, but rather enhance them. Tools such as GQM+Strategies, DesOps, and Balanced Scorecard combinations offer models for how OKRs can be layered into existing governance structures to improve agility and responsiveness without sacrificing control (Oner et al., 2024; Silva & Santos, 2024; van Erp & Rytter, 2023).

To conclude, the reviewed literature suggests that OKRs are not a one-size-fits-all solution - but under the right conditions, they offer a powerful tool for enhancing transparency, engagement, and strategic alignment. For Van Oord, the feasibility of OKRs lies not only in their theoretical appeal, but in how thoughtfully they are tailored to the organization's specific structure, workflows, and culture.

3.2 Answers to Sub Question 1

The findings of the SLR can be used to answer the first sub question SQ1:

"What are the key drivers and best practices for OKR adoption in comparable organizations?"

The literature shows that organizations turn to OKRs when they face difficulty translating long-term strategies into meaningful team-level goals - especially in environments characterized by complexity, innovation, and cross-functionality. This motivation stems from a deeper need: traditional performance systems like MBOs and KPIs often struggle to accommodate work that is collaborative, emergent, or purpose-driven. OKRs are designed to fill that gap by providing a shared, lightweight framework for continuous goal alignment.

This argument is supported by the way OKRs are structured: they encourage organisations to set ambitious yet measurable objectives and pair them with transparent, actionable key results. Their success across diverse sectors appears linked not only to their structure but also to how they are introduced. Organizations that treat OKRs as tools for learning and coordination, rather than as control mechanisms, tend to see better results.

What this tells us is that the drivers for OKR adoption are not superficial trends but responses to structural and organizational shortcomings in conventional management systems. Furthermore, best practices such as iterative rollout, co-creation with teams, and integration with existing processes emerge not as general management advice, but as necessary design conditions to ensure OKRs are seen as empowering rather than bureaucratic.

4 Case Study and Interview Results

The objective of this research is to describe added value of introducing the OKR methodology at a marine engineering contractor by analysing the preferred conditions for implementing OKRs and assessing the attitude of employees of several use cases related to Van Oord towards this method. To find answers in practice, a case study was set up at Van Oord. This chapter uses insights at the company to analyse potential departments for the introduction of OKRs and presents a summary of the results from the interviews held with participants at the company and DigiShape.
This chapter aims to answer the sub question SQ2:

"How do employees across different use cases related to Van Oord perceive the introduction of OKRs?"

4.1 Case Study Descriptions and Results

Here follows the description of the investigated use cases based on personal communications, observations and received documents.

4.1.1 Ocean Health Initiative at Van Oord

The Ocean Health[1] initiative at Van Oord is part of a strategic effort to integrate marine ecosystem protection, restoration and creation into the company's core business operations. As a pioneering sustainability-driven program, Ocean Health focusses on the following ecosystems: mangroves, corals, seaweed, seagrass, and shellfish - to make commercial project proposals. By aligning ecological goals with client-facing operations, the initiative positions Van Oord as a frontrunner in nature-based solutions within the marine engineering sector (Ocean Health, 2025).

Internally, Ocean Health is a quickly evolving unit. Up to 2024 it was financed by the Business Unit OFE (Offshore Energy). In 2025 the Executive Committee decided to turn Ocean Health into a separate business unit on the same level as the two regular business units of Van Oord: Dredging and Infra Operations (DRI) and OFE. Whereas OFE and DRI have 3 and 4 business lines respectively, Ocean Health is a business unit with 1 business line. The business line overlaps partially with OFE for offshore ecosystems, and partially with DRI for coastal ecosystems. Often Ocean Health projects are an add-on to OFE or DRI projects.

Ocean Health operates with as a multidisciplinary team structure, where each target ecosystem is supported by a small, focused team composed of representatives from the commercial, engineering, and operations departments. These teams are called *Ownership Teams*. They consists of commercial employees from Ocean Health, supported by ecosystem experts from the Engineering and Estimating (E&E) environmental department and experienced operations employees from the project pool. The commercial core of Ocean Health itself consist of close to 10 employees, with 2 team members for each of the five projects and then some extra tasks. These ownership teams have begun to experiment with their own OKR framework to support their innovation-related activities. The OKRs are maintained in Excel-based templates, one for each ecosystem type, with a consistent structure of three high-level objectives, each linked to three to five key results and additional sub-key results. This format has proven effective for tracking progress and assigning responsibilities, offering a familiar and low-barrier interface for the teams involved (Pers. Comm., 2024).The Ocean Health team currently holds monthly OKR update meetings, during which teams collaboratively populate and review the templates. Each one-page template is tailored to the needs of the respective ecosystem type, resulting in a five-page OKR set for the entire department. These documents provide a clear snapshot of ongoing innovation activities, although they are not yet embedded into a formal reporting hierarchy or digital project management system.

Despite this promising structure, the pace of progress within the initiative remains modest. Most team members are simultaneously engaged in core project delivery roles - such as tender support - which limits their capacity to contribute to innovation-focused tasks (Pers. Comm., 2024).

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[1] https://www.oceanhealth.world/

Overall, Ocean Health illustrates both the potential value and practical limitations of OKRs in its setting. The department's self-developed templates may serve as a model for other teams within Van Oord, particularly if efforts are made to integrate these frameworks into more formalized planning tools and processes.

4.1.2 Net Zero Emissions

Within Van Oord's corporate sustainability strategy, the Net Zero Emissions initiative is one of the four strategic pillars, along with Enhancing the Energy Transition, Accelerating Climate Actions, and Empowering Nature & Communities. These pillars are operationalized through the company-wide S.E.A. (Sustainable Earth Actions) programme, which serves as the coordinating structure for aligning all sustainability efforts under a coherent and strategic vision(S.E.A., 2024). S.E.A. is managed by a separate corporate department, but the activities happen mainly in 2 business units and the staff departments. The Net Zero Emissions pillar is overseen by a dedicated project manager and team at corporate sustainability, working at the intersection of the ship management department (SMD),Procurement (PROC) and Engineering & Estimating (E&E).

The goal of the Net Zero pillar is to achieve full greenhouse gas (GHG) neutrality across all emission scopes by 2050, in alignment with the 1.5°C objective of the Paris Climate Agreement (S.E.A., n.d.). This target is supported by a science-based trajectory developed in consultation with the Science Based Targets initiative (SBTi[2]) for which Van Oord applied. The proposed transition pathway includes intermediary goals such as a 35% reduction in Scope 1 emissions, 100% renewable electricity sourcing for Scope 2, and a 25% reduction in Scope 3 emissions by 2030, with further reductions (up to 96% in Scope 1 and 90% in Scope 3) planned by 2050. The remaining residual emissions are to be offset through certified carbon removals (Claessens et al., 2024).

Organisationally, the Net Zero team is coordinated under the Corporate Sustainability department, but most of the actual developments happen elsewhere in the company. This department chairs a steering and working group with experts from all relevant departments. This interdisciplinary team includes experts in mechanical engineering and environmental science, tasked with supporting tenders, advising on low-emission solutions, and embedding emissions-conscious decision-making into both projects and operational workflows. Their responsibilities include quantifying emissions, developing emission reduction strategies, and ensuring that investments in sustainable technology - such as zero-emission vessels or alternative fuels - are reflected in commercial proposals (Pers. Comm., 2024).

The departments that have members in the Net Zero working and steering group are SMD, E&E and PROC. First, the Energy and Emissions Engineering discipline within the Production Engineering department at E&E makes sure all tenders have a net zero capability. Second, SMD makes sure the vessels are capable of operating on alternative fuels. And third, Procurement makes sure these alternative fuels are actually purchased. The Corporate Sustainability department itself is responsible for reporting the accomplishment with alternative fuels in the annual reports and for the SBTi targets.

A key characteristic of Van Oord's approach is its emphasis on emissions transparency. Since 2022, the company has adopted a fully standardized emissions reporting framework in line with the GHG Protocol, including all 15 categories of Scope 3 emissions, and reports annually via the CDP (Carbon Disclosure Project), consistently achieving top scores relative to industry peers. This scope of disclosure includes not only conventional pollutants like CO_2 but also black carbon and fine particulate matter, illustrating Van Oord's advanced position in emissions accounting (Pers. Comm., 2024). While the Net Zero team does not currently work with a formal OKR structure, internal communications indicate that the way of working strongly aligns with OKR principles. Each team of the initiative uses clear, time-bound objectives, measurable performance indicators, and cross-functional collaboration to drive progress.

4.1.3 DigiShape Initiative

The Van Oord corporate strategy has defined 3 strategic themes: The right people, Sustainability and Digital. Van Oord has various investments in these 3 enablers. One of the investments in the Digital enabler is DigiShape. DigiShape is a Dutch multi-stakeholder platform designed to accelerate digital innovation in the water domain. It brings together a triple helix of partners (public, private, and academic organisations) to collaboratively address complex challenges in water systems, climate

[2] https://sciencebasedtargets.org/

resilience, and digital infrastructure. Van Oord, Deltares and Rijkswaterstaat are the 3 founding partners. Van Oord and Boskalis are the core industry partners. Royal Haskoning, Arcadis, Witteveen+Bos, BZIM, HKV Lijn in Water, Hydrologic, Periplus, Maris and Smartport participate as consultancy firms. From the knowledge institutes: MARIN, TU Delft, Deltares, BUas. As government partners: Informatiehuis Marien, Rijkswaterstaat, Ministerie van Infrastructuur en Waterstaat and Port of Rotterdam. The partner organisations contribute to DigiShape at different levels of commitment. 5 partners have delegated an employee to become part of the daily management, the *kernteam* Furthermore, an external chair has been hired to accelerate collaboration. Through this combination of actors, DigiShape acts as an enabler for collaboration, innovation, and knowledge sharing (DigiShape, n.d.).

The platform operates on the belief that better data sharing, modelling, and forecasting tools are critical to tackling pressing water-related challenges in deltas and coastal environments. The platform follows a programmatic approach, with each program focusing on a high-impact use case run as project in which a subset of DigiShape partners participate.

One of DigiShape's central missions is to support the development of an open, standardized ICT backbone for FAIR (Findable, Accessible, Interoperable, and Reusable) data management, tailored to Dutch standards. This backbone is intended not only for academic users and researchers, but also for policymakers, contractors, and operational teams within the public and private sectors. In doing so, Digishape aims to support evidence-based decision-making and innovation throughout the Dutch water sector (DigiShape, n.d.).

The platform is coordinated by an *aanjager* (instigator or programme manager) whose task is to stimulate active collaboration between partners, identify shared objectives, and ensure that promising initiatives turn into executable projects. As described in interviews and events such as the biannually held Digishape Day, the role of the aanjager is to act as a connector and project enabler: "I want to bring governments closer and realize concrete projects," the *aanjager* states (van den Burg, 2024).

Digishape partners have signed a contract to become partner of DigiShape. There is also an out-of-pocket subscription fee. DigiShape is not a formal legal entity (yet), it is a collaboration to actively explore ways to improve internal alignment and goal-setting. During the course of this research, Digishape expressed interest in adopting an OKR (Objectives and Key Results) framework to describe partner-level objectives and monitor their progress (Pers. Comm., 2024).

4.1.4 Overview of existing reporting systems

Ocean Health

This table outlines the timeline and structure of responsibilities across various stakeholders involved in the Ocean Health initiative and explains how updates and progress are shared and managed. The structure is divided into four recurring timeframes:

Frequency	Responsible Group	Main Activities	Purpose
Bi-weekly	Ownership Teams (OST)	Work via the OKR framework on objectives and actions through regular meetings.	Maintain speed; meetings can be duplex (info-sharing or deep-dive discussions).
Monthly	Ocean Health & Estimating & Engineering (E&E)	Share progress between ownership teams.	Exchange learnings, address challenges, and discuss overarching topics like funding.
Quarterly	Management	Engage in ongoing stakeholder management; update key internal clients and departments.	Ensure alignment with internal stakeholders and involve other commercial and technical leads.
Yearly	Ocean Health & E&E (All participants)	Update the Roadmap Canvas to support strategic planning and annual cycles.	Reflect on vision-level goals, validate relevance of services/products, and engage with the market.

Table 8: Ocean Health reporting structure

According to internal communications, the lack of available time and dedicated budget are key constraints inhibiting broader OKR adoption and more structured follow-up (Pers. Comm., 2024).

Net Zero Emissions

Within the Net Zero Emissions at Van Oord, reporting practices are becoming more transparent, better structured, and clearer in terms of responsibility. Several interviewees mentioned that there has been a recent push to assign clearer ownership to sustainability-related tasks and deliverables. In the past, responsibilities were sometimes passed around informally, which made coordination difficult, especially when no one followed up properly.

Progress tracking is typically done through a shared Excel-based tool, which includes an overview of all ongoing actions, assigned responsibilities, and the current status of each item. This file is used during bi-weekly update meetings, where everyone involved comes together to check in, discuss any issues, adjust timelines, and redistribute work if needed. These meetings have helped the Net Zero initiative stay aligned, especially when tasks are shared across different departments.

On a broader level, the Net Zero contributes to the organization's annual climate report, which is prepared together with accountants and submitted as part of Van Oord's climate transition planning. This includes external checks and compliance with new EU rules on non-financial reporting. Internally, weekly team check-ins and quarterly planning rounds are used to manage personal deliverables and upcoming milestones. The initiative also maintains a structure involving 'champions' who are responsible for specific workstreams, making sure the long-term goals are connected to day-to-day activities.

Although these practices are already quite developed, especially compared to other departments, some challenges still remain. Participants pointed out issues like combining data from different sources, overlapping project schedules, and the need to make sure plans are realistic. The idea of "under promise, over perform" was mentioned more than once as a useful mindset when it comes to delivering on sustainability goals in a reliable way.

DigiShape

Digishape does not employ standardized, organization-wide reporting structures. Instead, reporting practices are project-specific and decentralized, typically shaped by the needs of the individual use cases and the preferences of participating partners. Coordination is primarily facilitated through biannual events such as Digishape Day, where partners share project updates, present ongoing research, and identify opportunities for new collaborations. These events function as informal reporting moments and play a key role in maintaining alignment across the network (Digishape Day, 2024;F,I).

Within specific projects, progress is often tracked through internal documentation, workshops, and shared digital platforms (Jupyter notebooks for data science applications or cloud-based repositories such as Azure). However, there is no unified performance or outcome reporting system across all Digishape activities. The degree of formality in reporting varies by partner organization and is often influenced by the funding source or lead institution.

During interviews, participants highlighted the challenge of maintaining consistent visibility across projects due to this fragmented structure . While this decentralization supports flexibility and innovation, it also creates a need for improved transparency and coordination mechanisms. The introduction of an OKR-based approach has been proposed as a potential method for enhancing internal alignment, clarifying partner objectives, and facilitating more structured reporting on progress and outcomes.

Across all use cases, reporting systems tend to be semi-structured, Excel-based, and decentralized. While they allow for flexibility, participants frequently expressed a desire for more visibility, integration, and strategic alignment - features they associated with a potential OKR system.

4.2 Results from the interviews

The previous section outlined the structural and strategic context of the three use cases, the following section presents perceptions of employees working within or alongside these environments. The aim is to surface shared and diverging views on the feasibility and potential impact of OKRs. The results are structured according to the main themes that emerged from the thematic analysis of the interviews.

Each section discusses insights from multiple interviewees, considering common perspectives as well as any significant differences between use cases, roles, or experience levels. The results will serve as the basis for the Discussion section, where these findings will be further analysed in relation to the literature and practical considerations for Van Oord and DigiShape.

Because the general attitude of participants towards OKRs is the most category closely related to the sub question these results are discussed extensively and per code. The following three categories will be explained based on overarching themes.

4.2.1 Perceived benefits as mentioned by participants

The first theme that arose from the transcripts was the aspects of the OKR methodology that the participants perceived as beneficial for their work or for the organisation. Because this theme is elaborated on the most, the perceived benefits are split into the eight codes: Alignment, Accountability, Knowledge sharing, Data sharing, Structure, Result focussed, Overview and Uncategorized Benefits. These benefits are all connected to each other in some way, and the findings are summarized based on the codes they were linked to, highlighting the most striking connections between them.

Alignment

The first benefit, alignment, was overall mentioned the most often in the interviews. Every participant mentioned this benefit at least once, directly or indirectly. Participants explain that alignment through OKRs can help to connect top-down expectations with bottom-up accountability, and that it can help anyone who is writing OKRs to take a moment and really think about their own contributions, and how this relates to a stated mission (A,F,I) As participant (A) stated: *"I find that often bigger promises are made than we can deliver. I think that such an OKR might contribute well to being aligned with each other"*. Alignment was mentioned in combination with data sharing several times. By directly connecting strategic goals with quantitative results, a strategy becomes measurable and (senior) management is automatically connected to data that is collected on the work floor (A,J).

Alignment was also mentioned together with a perceived gap in strategic communication and a willingness to adopt OKRs. Participants recognized alignment as a problem within Van Oord and explained how OKRs could fill this gap: "*While from below we think again yes, there is no vision at all. And instead of widening that gap you want to come together. This is real, I mean that sincerely, As soon as it is just super simple and streamlined and transparent, then it can really be a bridge."*(A).

Accountability

The second most mentioned benefit is accountability, often in combination with the impact on team collaboration and the effectiveness of the current reporting systems. The current sense of accountability is closely tied to the reporting systems in place. Some teams, especially in Net Zero Emissions, are relatively new teams and have developed a system similar to OKRs where progress is shared bi-weekly using excel files (D). In this system goals are also revisited every 2-3 months. The next step would be to formally call such a system OKRs and streamline it throughout the company. Almost every participant agrees that this would improve accountability on all levels, an important reason being an increase in transparency (B,C,I).

The increase in accountability can also come from a sense of purpose. Writing your own OKRs and aligning them to the company strategy and values creates emphasises the importance of a person's work. As (C) stated, *"You see that people really have a hold on that, like, what am I actually doing here? What is my value within this entire company? What is my role within all of this? And that works very positively. So I think in general, setting goals and then working together is a very positive outcome for people."*. The increased connection that employees feel toward their work and the company then has a very positive effect on team collaboration(A,C,E).

Knowledge Sharing

OKRs were often seen as a means to improve structured knowledge sharing, especially across departments and roles. Several participants noted that OKRs reflect a way of working already familiar within Van Oord: setting a direction, defining outcomes, and tracking progress over time (B,D,E). One participant (B) explained: *"It's actually just a very logical way of working. We look at where we need to go, how we'll measure it, and we keep track. That's actually already woven into the whole tender and project process."*

However, while this approach is present in project management, it's not yet harmonized across different teams, especially when it comes to data processes. One participant (F) pointed to existing platforms like the Datahuis Marine and Informatiehuis Water, where data is collected and

made accessible, but emphasized the need for a next step: *“I would like to go a step further: harmonizing project processes, also in terms of data. That goes beyond just storing datasets.”.*

Participants explained that OKRs could help teams identify overlaps and gaps, as well as flag when certain goals aren’t progressing as expected (C,I). *“I think that helps you identify overlaps and gaps more quickly. And also challenge things when they’re not moving as fast as you’d like.”*(I). The potential for peer learning and alignment was also highlighted. OKRs offer visibility into how colleagues approach tasks, which can serve as inspiration or guidance: *“It can even be beneficial and motivating. If I see that one of my colleagues is doing this task in this way, I can follow that as well.”* (E).

Moreover, OKRs were seen as a tool for improving role clarity and team collaboration, especially in multidisciplinary teams like Net Zero. *“Now that we have everyone at the table, it really helps to clarify: what is the role of Procurement, what is the role of E&E, what is the role of Corporate and SMD?”* (D). This visibility improves collective understanding and facilitates smoother collaboration across domains.

Data Sharing

Participants frequently discussed the potential of OKRs to improve data-driven communication and the measurability of strategic progress. One interviewee (J) noted that while Van Oord has strong capabilities in quantifying operational details - like materials or costs- it becomes much more difficult when it comes to strategic initiatives: *“We can design things to the decimal - how much sand, how much stone, costs, etc. But it becomes more difficult when you have to attach that to a strategy or something that’s still unclear. I think this could help in that sense, by making you think: oh, I have to fill something in here - what do I actually put here? How do I make this measurable?”*

Participants also pointed out the value of OKRs in identifying overlaps, gaps, and slow-moving efforts. Participant I stated: *“I think you can identify overlaps and gaps more quickly. And also challenge things if they’re not moving as fast as you want.”* This kind of visibility was seen as helpful not only for operational teams but also for senior management, especially if OKRs are connected to automated dashboards: *“If you link the OKRs to systems that automate progress updates, stakeholders get provided with automatic information. That makes them more likely to engage - because they are being informed.”* (C).

Structure

Participants frequently emphasized the value of OKRs in creating structure in both thinking and workflow. For many, the structured nature of OKRs was not only intuitive but also closely aligned with Van Oord’s existing ways of working (B,D,E). OKRs were seen as a means of pushing teams to step back from daily operations and reflect on broader goals*. “I think it’s good to think about it. To take a moment away from daily tasks and keep an overview.”* (J). The method was perceived as a way of encouraging clarity, prioritization, and reflection, especially when goals had to be formulated concisely (A,E,G): *“Because I have to formulate it so briefly now, I think that actually helps.”* (I).

Another participant described how OKRs can be beneficial even in personal contexts, and noted how the method encourages breaking down large ambitions into specific, actionable steps: *“The goal is to find a job, but how do I achieve that? Through networking, writing a good CV, etc. It was really nice, this method can be really beneficial.”* (E).

Finally, OKRs were described as a tool to formalize existing practices by providing clearer definitions of goals and responsibilities: *“I think it looks a lot like what we’re doing now, but then we’d define things more clearly: this is the objective, these are the key results, this is what we’re trying to achieve with this action, and these are the people responsible.”* (D). In long-term projects in particular, short- and mid-term OKRs can prevent teams from losing focus: *“Otherwise, it’s easy to say: I’ll just do this other project first, or deal with this urgency.”* (D).

Result Focussed

Many participants explained that OKRs could help increase **result orientation** by encouraging teams to define clear, concrete goals and regularly reflect on progress. As participant (J) explained: *“It forces you to take a moment to ask yourself: am I working on the right things?”* The ability to step back and evaluate whether current activities are still aligned with intended outcomes was seen as a valuable feature of the OKR method (D,J,). Participants also noted that by clearly defining short- and mid-term goals, OKRs help prevent a drift in focus, particularly in long-term projects: *“Those long-term projects, they last 20 or even 50 years. That’s why short-term and mid-term goals with clear actions and concrete results are so helpful. Otherwise it’s easy to say: I’ll just do this urgent task first, or this*

project, or that thing that came up." (D). OKRs can then help teams to stay on track and prioritize outcomes over distractions.

Overview

Another recurring code was the potential of OKRs to improve overview and focus. Participants pointed out that in a project-driven environment, it is easy to get sidetracked by new priorities or ad-hoc requests. OKRs can provide a shared agreement on objectives, which helps to maintain direction and clarity. As one participant (C) explained: *"But if there are things that end up on your plate that you haven't agreed upon together beforehand, then you can say: wait a minute, this isn't what we agreed on."* This predefined agreement creates space to push back on tasks that do not align with collective goals. While there were some concerns about adding yet another system, most acknowledged the value of having a central overview (A,C). This perspective also changes based on management level, as middle management tended to complain more about reporting tasks, while project employees and senior managers/executives seemed to be neutral or favourable towards it.

Participants also noted that OKRs could help improve transparency and communication within teams, when integrated into a dashboard or visual overview. By making OKRs visible, colleagues can quickly understand what others are working on and reflect on their own contributions. Participant (G) described it as follows: *"First of all, you can easily show your colleagues: this is what I'm going to do this year. Or in the next three weeks. And when they suddenly see it, they think oh, that looks quite organized. What am I actually doing?"*

Uncategorized Benefits

In addition to the core themes discussed above, participants also identified several benefits of working with OKRs that were less frequently mentioned but still relevant. One participant (C) appreciated the supportive nature of the system, explaining that it can provide helpful resources and structure without creating extra workload: *"I don't have to generate it myself, so it's not a burden for me. But I do get tools I can use with my supplier or others. That helps."* The same participant emphasized the motivational effect of working with defined goals, and noted how OKRs can provide a sense of direction and meaning at work.

Perceived Drawbacks

While most participants acknowledged the potential benefits of OKRs, several also expressed concerns about the practical and cultural drawbacks of implementing such a system. One common concern was the risk of OKRs becoming yet another bureaucratic layer. As one participant (A) stated: *"You hear people saying the regulatory pressure just keeps growing. This could be something where people say: 'oh no, yet another system'."* Others warned against introducing OKRs in a way that duplicates existing reporting mechanisms, rather than streamlining them: *"You have to strike a balance so we don't end up over-reporting. Sometimes it feels like you're just reporting for the sake of reporting."* (C).

In the context of DigiShape, some participants raised concerns about accessibility and integration, particularly if OKRs were implemented in new software systems that require managing access across different organizations: *"It doesn't necessarily need to be in a software system. That would be nice, but then you're dealing with access permissions. How do people from different organizations gain access?"* (I).

The cultural implications of OKRs were also discussed. Participants pointed out that increased visibility and measurement can bring discomfort, particularly when it comes to accountability and performance evaluations. As participant (K) stated: *"Sometimes, to be honest, people don't mind when certain insights are missing. When you make something visible, people might have opinions on it and be judged accordingly. Some people find that risk of losing face difficult.*

Another concern was the potential for OKRs to prioritize individual performance over team results (I,K). *"If you start defining personal OKRs, there's a risk that people will value their own objectives more than the team's. And if individual performance is tied to evaluation, people might focus on their own goals, even when team outcomes are more valuable to the organization."*(K). This concern emphasizes the importance of carefully framing OKRs as a collective and collaborative tool, rather than one focused solely on individual success.

Finally, participant (I) noted that OKRs may not be relevant or appropriate for certain operational contexts, such as tightly regulated project execution teams that already work within formalized systems: *"That's why I wouldn't apply it to the execution side of projects, they already have their own goals defined in a management system. It might be more useful for high-overview or*

internal projects." This insight further explains why OKR frameworks may need to be tailored to each department or team.

Willingness to Adopt OKRs & Level of Awareness
Most participants expressed openness toward adopting OKRs, provided that the method is introduced with simplicity and clarity, and integrated into existing structures. As one participant (A) put it, *"Once it becomes super simple, streamlined, and transparent, then it can really be a bridge."* The method was particularly well-received when framed as a logical extension of existing practices, such as in tenders or strategy tracking. Some participants indicated that they would be enthusiastic to experiment or learn more, but emphasized the need for an accessible entry point; for example, via automated templates or low-barrier reporting routines. Others highlighted the need for collective buy-in, emphasizing that implementation should be collaborative and aligned with team needs.

Participants varied significantly in their awareness and familiarity with the OKR method. Some had prior experience with OKRs and were already motivated to experiment further. Others expressed interest but lacked concrete understanding, and stated that a clear example or use case would help them better grasp how OKRs could function in their context. At the same time, several participants underscored that training should follow awareness, not precede it (I,J). *"If people start saying, 'I think I need training,' that's the moment to offer it. Otherwise, you're teaching something they don't yet know they need."* (I). Across the board, participants supported a progressive introduction, ideally using pilots or internal examples, and emphasized the importance of communicating the 'why' behind OKRs to secure engagement and shared ownership.

4.2.2 Current Challenges in communication & knowledge sharing

This section presents the main challenges in communication and knowledge sharing identified during interviews, grouped into four interconnected categories: transparency and accountability issues, strategic communication gaps, effectiveness of current reporting systems, and the desire for a centralized communication hub.

A recurring challenge was the lack of clarity around roles, progress, and responsibilities, particularly in cross-departmental initiatives. Several participants expressed that while individuals are often willing to share what they are working on, there is no shared system for tracking responsibilities and follow-up, leading to ambiguity and delays (D,K,H). As one respondent (D) noted*, "It's just unclear: does this project continue or not? That's why we've created a recurring meeting where everyone is present, to have everyone at the table."*

Additionally, while team members generally know what they are individually responsible for, this information is not always formally documented or visible to others, which reduces overall accountability. "*You have someone responsible, but if they don't have time, they just pass it on. That's fine, but then it should be clear who is actually doing what."* (D). The absence of this transparency can undermine consistent execution and follow-up.

Respondents also highlighted the difficulty in operationalizing transparency, especially in IT and innovation-driven teams, where tasks and ownership evolve quickly (K). Moreover, leadership support is often perceived as ad hoc, driven by personal engagement rather than institutional structures: *"It's all on a best effort basis. You sit together and try to find a solution."*(G).

Another major theme was the disconnect between top-level strategy and day-to-day operations. Respondents frequently described how strategy-related updates or objectives remain at the managerial level and do not translate into actionable goals for employees(A,C,I,K). *"There's a need for concrete strategic goals from the CFO or other C-level executives. Ones that are visible and show where we're heading."*(K).

This lack of alignment between organizational levels was viewed as a key barrier to motivation and engagement. One participant (A) commented, *"From the bottom, it often feels like there is no vision. You want to bridge that gap, not widen it."* Others noted that this issue extends to compliance and emerging regulatory frameworks, such as CSRD, which are often only understood at the top management level (E,K). Participants emphasized the need for clearly articulated, organization-wide goals supported by accessible metrics and regular updates(A,C,I,H). This would help all stakeholders understand their role in the larger strategy and enable middle management to engage more effectively with teams.

Interviewees listed a number of existing tools and processes currently in use for reporting and planning, including Excel tracking sheets, roadmap planning templates, agile sprint boards, and DevOps or Power BI dashboards. While these tools serve important functions, many respondents

described them as fragmented or overcomplicated(E,J,G): *“Before you know it, you’re doing tens of different reports just to justify processes. That could be much more structured and efficient.”*(C). Moreover, the effectiveness of these tools varied depending on the context. For example, project planning and 5sprint tracking were well supported in software development teams but less applicable to strategic or innovation-oriented tasks. *“It’s a good tool, but it’s really just for data science-like projects.”* (J).

While some participants had already adopted systems resembling OKRs, linking long-term objectives to shorter-term deliverables, the majority indicated that measurable outcomes and progress tracking are not consistently implemented across teams(D,G,J,K). This lack of uniformity was seen as a barrier to broader coordination.

Many respondents expressed a strong desire for a single, centralized platform to improve visibility, reduce duplication, and support consistent goal tracking (C,H,I,K). Currently, communication and reporting tools are spread across various platforms such as Excel, Miro, Azure DevOps, Teams Planner, leading to confusion and inefficiencies: *“You should ideally have one system where everything comes together. But without a clear direction, everyone does it their own way… …Everyone develops their own way of doing things. Eventually, bringing all that information together becomes very difficult.”*(K)

Participants also highlighted the opportunity to use such a platform for real-time progress updates and better internal communication, especially within and between initiatives like Digishape(C,G,H). One participant (G) noted that even public-facing platforms, such as the Digishape project page, lack clarity on project status or outcomes: *“When I look at it, I can’t tell what’s done and what’s not. I pointed that out, and they agreed.”*

4.2.3 Implementation Preferences

Participants expressed a range of preferences regarding how OKRs should be introduced and embedded within Van Oord and DigiShape. Their responses point toward the need for a practical, participatory, and well-supported rollout, with attention to training, leadership, and tool integration.

Integration of OKRs

Participants generally favoured an incremental and pragmatic approach to integrating OKRs into existing systems, rather than introducing entirely new tools. Many explained that aspects of the OKR method already resemble current practices, suggesting that successful integration would rely on relabelling and structuring familiar routines rather than a complete change. As one respondent (D) noted, *“We’re basically already doing this - we just haven’t labelled it as OKRs yet.”*

There was a strong preference for low-complexity, familiar platforms like Word documents, Excel, or Power BI dashboards for initial implementation, with several pointing to existing tools like Azure DevOps as logical integration points (I,K). Automation and avoidance of excess manual reporting were emphasized repeatedly as a critical condition for adoption: *“If you introduce this expecting people to manually report progress, it’ll never get off the ground.”*(C).

Participants also stressed that OKRs should replace, not add to, existing reporting structures, and that integration must align with different team needs. Flexibility in tooling was seen as important, provided it supports a unified strategy and traceable progress. In terms of cadence, participants suggested quarterly reviews as the preferred rhythm for reflection and course correction, which can be aligned with governance cycles already in place.

Across the various aspects of implementation - training, leadership, tooling, and feedback- several overarching themes emerged that participants commented would be crucial to a successful OKR implementation.

Balanced Introduction

First, participants consistently emphasized the need for balance between structure and flexibility. OKRs were welcomed as a tool to bring focus and direction, but mainly if they were integrated in a low-barrier, supportive, and non-bureaucratic way. This balance was reflected in the widespread preference for practical, iterative training and the call for lightweight integration with existing systems, rather than wholesale transformation.

Participants strongly favoured hands-on, iterative learning over formal classroom-style training (A,C,E,I,K). There was consensus that employees learn best by doing and reflecting. As one (A) participant noted, *“99% of people learn by doing. They need an example to have the conversation.”* Suggestions included short webinars, role-specific coaching sessions, and workshops where employees define their own OKRs with guidance from a coach. This approach could be more engaging than a generic one-day training and more effective in developing OKR proficiency.

Crucially, respondents emphasized that training must follow awareness: *"You need a minimum level of awareness before justifying a training. Otherwise, you're teaching people something they don't know they need."* (I). Embedding training within practical team settings and linking it to existing goals was seen as a natural way to build internal capability (C,K).

Participants recognized that OKRs require continuous refinement, not a one-time setup. Several advocated for regular feedback moments, tied to project phases or quarterly reviews, where goals could be adjusted and progress reassessed (A,G,I,K). *"It's an iterative process. If everyone tries it and we give each other feedback, we'll improve ourselves."* (I). Embedding these feedback loops within team rhythms was considered vital for making OKRs useful rather than bureaucratic.

Social Dynamics

Secondly, the importance of social proof and peer learning was a recurring theme. Success stories, visual examples, and early adopters were all seen as critical to forming acceptance. Participants preferred seeing OKRs in action over just verbal and theoretical instruction, explaining that cultural adoption depends as much on internal storytelling and role modelling as on formal training.

The value of early success cases was mentioned frequently. Several participants emphasized the power of seeing OKRs in action. *"If I can show that this has value through what I'm doing, I hope others will follow."* (I). The use of visual examples and demonstrations, particularly from colleagues or external speakers with firsthand experience, was seen as highly motivating and accessible (A,G,I,J): *"A figure says more than a thousand words."* (A). Early adopters were encouraged to take the lead in implementation by demonstrating the usefulness and adaptability of the method, and thereby allowing others to organically adopt the method (C,D).

Leadership Commitment

Finally, both leadership commitment and local ownership were identified as preconditions of success. While strategic guidance and tool alignment should come from senior management, participants stressed that day-to-day responsibility must be shared by teams and champions embedded in operational work.

Participants were clear that top-down support is essential. Without a clear directive from senior leadership, OKR implementation would be inconsistent or even resisted: *"If there's no management directive behind it, people won't do it"* (K). At the same time, respondents welcomed flexibility in how teams apply OKRs, as long as the commitment and strategic direction come from the top. This balance between direction and autonomy was seen as critical to encourage buy-in (A,I,K). Several participants also expressed frustration with current leadership indecision, particularly regarding tool selection and standardization . *"This is one of those examples where management needs to make a decision about how we work."* (K). A shared method and a consistent toolset, even if simple, would support a more aligned rollout (I,K).

To complement leadership support, participants suggested designating internal champions or process managers who could guide the OKR rollout within their teams. These champions would act as facilitators and coordinators, helping collect input, structure goals, and ensure follow-up during regular OKR review cycles. Ideally, these individuals would be closely involved in operational work, such as innovation projects or team leadership, and could model good practice to peers (C,D).

These themes reveal that OKR implementation is not just a technical or administrative task; it is a change process that must be co-created, continuously supported, and grounded in the realities of existing workflows.

4.2.4 Perceived Effectiveness of OKRs

Across participants' reflections on the potential impact of OKRs, a recurring theme was their ability to bridge strategic intentions with practical execution. OKRs were consistently seen as a mechanism to help individuals and teams stay focused, maintain alignment, and make progress visible. This was especially apparent in long-term projects or collaborative contexts, where clarity of direction and shared responsibility often fade over time.

Individual Effectiveness

Participants widely agreed that OKRs could improve individual effectiveness by providing direction, focus, and motivation. Several noted that goal-setting increases awareness of one's role within the organization and encourages more conscious engagement with daily tasks (B,C,D,G). As one participant (G) put it, *"Setting goals, if they're realistic, makes you more efficient and effective."* Others

explained how OKRs support self-assessment and urgency, especially when linked to progress reporting: *"You have to say where you're at. That helps, because otherwise there's less urgency."*(D).

Participants also indicated that OKRs could support individual development and help teams align expectations transparently (C,E). Making individual goals public within a team, for instance, was considered helpful for mutual understanding and collaboration: *"If everyone says: this is what you can hold me accountable for - it's very useful."* (I).

Ownership and Visibility

OKRs were also seen as a way to strengthen engagement and ownership across team members. *"People find a sense of purpose in it: what's my role in the company? That works really positively."* (C). Making goals and progress transparent was said to increase both accountability and a more balanced contribution across stakeholders (G,H). Participants believed this could lead to more proactive behaviour. By jointly defining objectives and dividing them into actionable steps, teams could reduce ambiguity and improve workflow efficiency (D,E,I). One interviewee (E) shared: *"We have the same goal and split it into steps- this part for you, this part for me. It speeds things up and reduces delays."*

Several respondents also mentioned that automation and shared dashboards could support collaboration by reducing the need for status updates and manual reporting. When progress is visible, stakeholders stay informed and involved, even in more complex or distributed teams (A,C,G).

Long Term Tracking

Finally, participants noted that OKRs could provide structure and continuity in long-term or strategic projects, which are often vulnerable to shifting priorities and vague deliverables. OKRs were described as a way to break down large ambitions into manageable, measurable steps, thus preserving momentum over time: *"Otherwise, you just do the urgent thing first and the long-term goal gets lost."* (D).

The potential for integration with visual tools like dashboards was also mentioned as a way to track complex initiatives involving multiple workstreams or stakeholders (C,D,J). In this context, OKRs were seen not only as performance tools but also as instruments for navigating uncertainty and aligning across interdependent roles.

4.2.5 OKRs generated with participants

After the introduction part of the interview, participants were asked to describe their roles in OKR-style. At the end of the interview, participants were then asked the same question to see if the extended discussion on OKRs would improve their understanding of writing the objectives and the key results. From the answers of this question a list of OKRs was produced explaining the main activities and of each participant of which two examples can be seen in tables 9 and 10. The overview of OKRs also serves as a concrete example of what this goal-setting method can look like in practice. The complete overview of OKRs can be seen in Appendix B: Participant OKRs.

Objective	**Ensure the availability of green molecules in the ship fuel supply chain through volume bundling and strategic agreements.**
KR1	Measure the **number of parties actively contributing** to the volume bundling initiative.
KR2	Determine **Van Oord's share** in the total volume bundling effort.
KR3	Track the **amount of secured volume** in the market through offtake agreements.

Table 9: OKR for securing green molecules in the supply chain

This OKR was generated based on the transcript of participant C. The OKR describes the three most important results that track the progress of the objective: "Ensure the availability of green molecules in the ship fuel supply chain through volume bundling and strategic agreements.". The objective explains in one sentence what the goal of this particular project is and shows that is in line with the overarching strategy (Net Zero).

Subsequently, the key results show in three sentences how this goal can be reached. They are not necessarily the steps that need to be performed but rather a description of how progress of the goal can be tracked. Note that the key results in this case do not contain a numerical component. The absence of this quantification mean that in the relatively short span of the interview (30-45 mins) it is difficult to completely teach the process of writing perfect OKRs, especially since this was not the

primary focus of the interview. At the same time, it is unlikely that a participant would know the exact measurements by head, as they were not asked to prepare this beforehand.

Objective	**Strengthen DigiShape's mission alignment and secure a sustainable project portfolio.**
KR1	Assess whether **partners still endorse DigiShape's mission** and how they translate it into concrete goals for the next 6–12 months.
KR2	Develop a **project portfolio worth €20 million** within two years.
KR3	Establish at least **seven large-scale projects (€2–3 million each)** by securing funding from multiple stakeholders, including Rijkswaterstaat.

Table 10: OKR for Strengthening DigiShape's Mission and Project Portfolio

The OKR in table 11 refers to the objective set by DigiShape's instigator, participant F. The instigator's job is to realise DigiShape's vision, "The Netherlands is the best monitored delta in the world", and to connect and involve DigiShape's partners. Two of the key results can be measured with data relating to either the money invested or the amount of projects established. The first key result can be improved by adding the number of partners that need to be assessed. It is clear in this OKR that the participant takes a central and leading role in reaching the objective. This can be seen as an individual OKR as these are the results the candidate wants to achieve himself.

4.2.6 Overview of different levels of OKRs

OKRs can be set at different levels of an organisation where they will have their respective characteristics. The difference between personal, individual, project-related, overarching and organisational OKRs lies in their context and purpose, the example OKRs are not literally derived from the interview results but are generated by the researcher and focus on the subjects that were discussed in the interviews. The example OKRs illustrate how this method can be used in real life and contain the characteristics of the different levels of OKRs explained in figure 10.

Personal OKRs (self-development, not necessarily work-related)
Definition: These OKRs are set by an individual for personal growth, which may or may not align with work objectives. They can help in achieving goals such as personal development, skill enhancement, health, or lifestyle improvements.
Example (for someone looking to improve leadership skills):

- **Objective:** Become a more effective leader and communicator.
- **KR1:** Read 3 books on leadership by the end of the quarter.
- **KR2:** Complete a public speaking workshop and deliver 2 presentations.
- **KR3:** Gather feedback from at least 5 colleagues on leadership performance.

Individual OKRs (work-related, aligned with organizational goals)
Definition: These are OKRs set by an individual within an organization, aligned with team, department, or company objectives. They help ensure that an individual's work contributes directly to the broader company or team goals.
Example (for a sustainability project manager at Van Oord):

- **Objective:** Implement emission reduction strategies for Van Oord's fleet.
- **KR1:** Develop a decarbonization plan for Scope 1 emissions by Q3.
- **KR2:** Engage 5 key suppliers in emission reduction initiatives by Q4.
- **KR3:** Secure SBTi validation for Van Oord's emission targets by the end of the year.

Project-Related OKRs (focused, temporary and execution-driven)
Definition: Project-related OKRs are designed to track progress within a specific project over a defined period. They help ensure the successful execution of a project by setting clear objectives and measurable outcomes and are tied to a specific timeline.
Example (project like implementing Digital Twin for water management):

- **Objective:** Implement a Digital Twin for water management to improve predictive analytics.
- **KR1:** Develop the initial proof of concept and validate with key stakeholders by Q3.
- **KR2:** Integrate real-time water data from at least 5 sources into the system by Q4.

- **KR3:** Conduct 3 pilot tests with Rijkswaterstaat and other partners to assess accuracy and functionality.

Overarching OKRs (strategic, long-term, impact-driven)
Definition: Overarching OKRs define broader strategic goals that extend beyond a single project or department. These OKRs align multiple projects, teams, or even entire departments toward long-term success.
Example (digitalization in water management):

- **Objective:** Drive digitalization in water management for improved efficiency and predictive planning.
- **KR1:** Develop a standardized digital infrastructure to enable real-time data integration across all water projects.
- **KR2:** Ensure 70% of all new water management projects incorporate digital tools by 2025.
- **KR3:** Establish a data-sharing framework with government agencies and private partners by the end of next year.

Organisational OKRs (strategic, company-wide, top level)
Definition: These are the main OKRs of an organization, often set by executive leadership to define the official company-wide priorities.
Example (innovation and digitalization):

- **Objective:** Realise a digitalization strategy to streamline data sharing and automation throughout the company or organisation.
- **KR1:** Ensure 80% of all new projects incorporate digital tools.
- **KR2:** Launch a company-wide data-sharing platform by Q3.
- **KR3**: Reduce manual reporting efforts by 50% through automation.

Level	**Personal OKRs (Self-Growth)**	**Individual OKRs (Work Contribution)**	**Project-Related OKRs (Execution)**	**Overarching OKRs (Strategic)**	**Organisational OKRs (company-wide priorities)**
Scope	Personal development, skill-building, or lifestyle improvements.	Work-related, linked to individual responsibilities.	Focused on a specific project's success and execution.	High-level strategic goals that guide multiple projects/teams.	Entire organization, aligning all teams toward common business objectives.
Timeframe	Flexible (can be short-term or ongoing).	Quarterly or annually, in sync with company cycles.	Defined by project duration (quarterly, yearly).	Long-term (spanning multiple projects, quarters, or years).	Set annually or quarterly and reviewed as part of the company's strategy.
Focus	Self-improvement.	Job performance and impact within the organization.	Deliverables, milestones, execution within a project.	Impact, alignment, transformation across multiple projects.	Define and drive the company's overall strategic direction.
Measurement	Personal progress (e.g., books read, habits formed).	Contribution to team/company goals (KPIs, performance).	Completion of key project phases.	Broader business success .	Metrics for financial, operational, and strategic performance.

Level	Personal OKRs (Self-Growth)	Individual OKRs (Work Contribution)	Project-Related OKRs (Execution)	Overarching OKRs (Strategic)	Organisational OKRs (company-wide priorities)
Alignment	Independent, self-driven goals.	Supports team and company objectives.	Supports organisational OKRs by delivering tangible project results.	Guides multiple teams, projects, and departments.	The top-level OKRs that all teams and departments align with.
Ownership	Set and tracked by the individual.	Set in collaboration with a manager.	Project teams, led by project managers.	Leadership or cross-functional teams.	Executive leadership or senior management.

Table 11: Overview of levels of OKRs

4.3 Answers to Sub Question 2

The findings from the case study and accompanying interviews provide answers to the following sub question SQ2:

"How do employees across different use cases at Van Oord perceive the benefits and challenges of OKRs?"

The interviews reveal a strong perceived need for greater alignment, visibility, and structure, especially in use cases like Ocean Health and DigiShape, where work is exploratory or strategically important but not always formally embedded in core project delivery processes. This need explains why OKRs were viewed positively by many interviewees, even though few had experience with the framework. The appeal of OKRs lies in their promise to bring coherence to fragmented initiatives without imposing excessive rigidity.

However, this perceived value is tempered by practical concerns. Time pressure, limited reporting capacity, and the risk of adding administrative overhead were raised consistently. These concerns are not incidental, they are grounded in the organizational reality of Van Oord, where teams are often stretched between innovation and execution, and where reporting practices are already complex. Importantly, the concern is not with OKRs themselves, but with how they would be integrated into this existing context.

The key insight here is that employees support structured goal-setting not because they want more control or top-down direction, but because they want shared clarity and self-direction. Their hesitation is not about the concept, but about how well the concept fits their working rhythm and autonomy. This suggests that the successful adoption of OKRs at Van Oord depends not on just promoting their features, but on designing their implementation to solve real frictions in current practice, without becoming another layer of compliance.

5 Discussion

This chapter discusses the main findings of the research in light of the existing literature and the specific context of Van Oord. It aims to synthesize insights from the systematic literature review with the results of the empirical case study and to reflect on the broader implications of introducing OKRs at Van Oord.

5.1 Insights from Interviews on Perceived Benefits

OKRs are generally perceived as a convenient way of setting goals and track progress, can be concluded from both theoretical and practical insights. There is a consensus among the interview participants that the OKR method can improve effectivity of workers by increasing a sense of ownership and because formulating the actual OKRs can help clarify their tasks. To further explain the positive perception of OKRs, the benefits are split into nine categories: *Alignment, Data Sharing, Knowledge Sharing, Structure, Result focussed, Overview, Accountability, Employee Effectiveness and Team Collaboration.*

Alignment appears to be one of the most important benefits, this can be explained by the nature of OKRs: connecting strategic objectives with measurable results. Being challenged to formulate an objective in this way forces a person to think about problems in both the long term and the short term. It also forces a person to translate their thoughts on how to solve problems in both words and numbers. This effect happens not only within one person but also between persons. Interview participants say that there is a feeling that strategic communication between management and other workers could be improved, in both directions. By formulating OKRs, employees on both sides of the hierarchal structure are invited to communicate their thoughts.

Data Sharing: The measuring of results and the collection of data is perceived as another important benefit. Long-term objectives which are written in a qualitative way cannot be measured until they are reached. Then there is also no way to track their progress. Participants have stated that the use of OKRs, where the key results always have a quantitative aspect, can help to make sure the right data is being measured. This gives the additional benefit of sharing data. Especially if OKR frameworks can be updated in an online environment, data can be shared within and between teams instantly. This gives employees immediate access to information that is needed for fast decision making, which in departments like commerce and operations can be invaluable.

Knowledge Sharing: Besides (raw) data, knowledge of innovations and of the people or teams that are working on specific innovations can be shared more easily if it exists in the same format throughout the company. Participants have stated that gaps and overlaps can be more easily identified using the OKR method. At the same time, this makes it easier for individuals to explain to their colleagues what they are working on and how they are doing it because the OKR method encourages one to explain activities in very concise sentences.

A more **structured** way of thinking is encouraged by the action of writing OKRs, as several participants have stated. The likely reason for this is that OKRs is a very structured way of setting goals because it always follows the same simple setup; one qualitatively written objective, followed by three to five key results that are measured quantitatively. Many teams and individuals already work in a similar way, whether intentional or not - introducing a streamlined method can make reporting more structured and efficient.

A **result focussed** mentality then follows this structured way of thinking. By writing down goals that are measurable, employees are encouraged to think their activities in terms of plain results that need to be reached and invites them to directly search for solutions - they already formulated the problem. It can make a person wonder if they are still on the right track, especially if their results have not been update for one or several weeks. It really leads them to think about specifically *what* needs to be achieved, and *how* it needs to be achieved, because they have written it down literally.

Overview: Tying into this comes the perceived benefit of improving overview. Employees can feel pressured by deadlines and can be distracted by smaller tasks. At the same time, on higher management levels, it can be hard to keep track of the innovations that are worked on and the people that are responsible for them. An OKR can give an overview of the progress of an innovation or activity at a glance, and when they are shared within the company digitally, any lagging behind will become visible immediately.

Then, an increase in **accountability** is one of the most important benefits that may come with the adoption of OKRs. This benefit was quoted the most in the interviews and also the literature review points out that this is one of the positive impacts of introducing OKRs. The sense of accountability starts on the individual level; the act of writing down objectives and activities and linking those to an overarching strategy can give more meaning to that person's responsibilities. If the next step is sharing those OKRs, preferably in public and online within the company, then an employee can be held accountable by its peers and its managers and vice versa. This does require a level of trust however, a person should not be discouraged to share his objectives out of fear of punishment, and this accountability should work both ways. Meaning that, if managers can openly see what their team members work on, then it is their responsibility to intervene when employees stray to for from the set direction (misalignment) or if their progress is lagging behind.

Employee effectiveness and team collaboration improvements can ultimately arise from this mutual form of accountability, if there is enough trust. There was a consensus amongst respondents that setting the right goals would improve effectiveness. This is logical, and the added value of OKRs in this sense is that there can be a uniform method of setting goals throughout an organisation, and that can be shared and compared directly within and between teams to provide clarity and, in the end, efficiency. Efficiency by reducing the risk of delivering double work, as team member can see each other's activities, and efficiency by speeding up the process of reporting.

5.2 Synthesis: Comparing Literature and Case Study Findings

The systematic literature review identified several recurring factors that influence the success or failure of OKR implementation. These include: strategic alignment, leadership support, cultural fit, tooling and reporting integration, time and capacity, and goal clarity. When placed alongside the interview findings from the use cases, both strong alignments and important contextual differences become clear.

Strategic Alignment
Across the literature, strategic alignment was the most frequently cited driver for OKR adoption. OKRs are described as an effective mechanism for cascading strategic goals to operational levels and ensuring that teams understand how their contributions relate to overarching objectives (Sowkasem & Kirawanich, 2021b; Trinkenreich et al., 2019; Vedal et al., 2021). This motivation was often heard in the interviews, particularly among participants in Ocean Health and Net Zero. Interviewees explained that existing goal-setting practices often lack a clear link to Van Oord's long-term sustainability ambitions. OKRs were viewed as a possible remedy, capable of surfacing cross-departmental goals and making abstract ambitions operational. However, while the literature often assumes a relatively centralized strategy-to-team flow, Van Oord's decentralized and project-driven structure means that alignment must also occur horizontally, not just vertically. This introduces complexity not widely addressed in current OKR studies, as they often assumed a strong vertical hierarchy. This can give rise to tension within Van Oord, where a bottom-up working culture is highly appreciated and celebrated by its workers.

Leadership and Ownership
The literature consistently stated the importance of visible and sustained leadership support (Butler et al., 2024; Rompho & Truktrong, 2024; Silva & Santos, 2024). Leaders are expected not only to endorse OKRs but to participate actively in their definition and review. At Van Oord, participants acknowledged the importance of senior-level commitment but stressed the need for local ownership at the team level. Some interviewees warned against top-down imposition in first instance, as especially engineers at Van Oord prefer their autonomy, and instead recommended a more facilitating leadership style, in which OKRs would emerge organically within departments. This is slightly different from the literature, where implementation is often orchestrated from central transformation teams or HR. For Van Oord, the opportunity lies in developing a hybrid model: management-endorsed, but team-driven. In practice this could give teams the freedom to develop their own OKR framework, or at least allow teams to choose the extent to which they rely on OKRs for goal tracking.

Cultural Fit and Autonomy
A key risk in the literature is the misalignment between OKRs and organizational culture. Studies show that when OKRs are introduced in performance-driven environments without psychological safety or room for learning, they risk becoming bureaucratic (Herkenrath et al., 2023; Rompho, 2024).

Van Oord's engineering culture values autonomy, practical output, and project flexibility. Participants expressed concern that OKRs might be perceived as another reporting burden unless clearly decoupled from performance appraisal and customized to each team's workflow. That said, the cultural emphasis on ownership, initiative, and long-term thinking could also act as a strength - OKRs may resonate more when framed as tools for self-direction and knowledge visibility, that can be used in both professional and personal settings.

Time, Capacity, and Practical Feasibility
Time availability and capacity were critical barriers in both the literature and the Van Oord case. Numerous studies report that OKR adoption fails when teams are overloaded or unclear about the added value (Butler et al., 2024; Stray et al., 2022). Similarly, many Van Oord employees, especially in Ocean Health and Net Zero, mentioned that the lack of time for reflection and structured planning is a barrier. However, some teams have already developed informal OKR-like systems (e.g., the Excel-based templates used in Ocean Health), suggesting that when teams perceive direct value, they are willing to invest time. The opportunity is therefore to design low-threshold OKR formats that align with current working rhythms and offer immediate utility. These OKRs can in early stages serve as a guide or memo during monthly or quarterly meetings, without having consequences attached to them.

Tooling and Reporting Integration
In the literature, fragmented tooling and poor integration with existing reporting systems are common reasons for OKR failure (Butler et al., 2024). Van Oord is no exception: several departments currently rely on Excel-based tracking systems and non-centralized progress documentation. Participants saw the potential for OKRs to bring more coherence, but only if they could be integrated into existing tools (e.g. PowerBI or project planning dashboards). Without such integration, OKRs risk becoming redundant or duplicative - a concern that arose in both literature and interviews.

Clarity and Goal Quality
Finally, the literature emphasizes the need for clear, measurable, and purpose-driven objectives (Kunrath et al., 2022; E. Locke & Latham, 2013). Interviewees at Van Oord mentioned this but also expressed concerns about the risk of over-simplifying complex or long-term goals. For example, participants in Net Zero noted that while OKRs could help visualize emissions targets, the complexity of supply chain decarbonization may not lend itself to quarterly metrics. This tension - between ambition and measurability - is an important one. It suggests that OKRs at Van Oord should remain aspirational but flexible, preferring direction over rigid quantification. Especially during the early stages of implementation, employees should not be criticized too harshly on reaching their OKRs, as this can lead to dissatisfaction with the method and can motivate persons to simply formulate their key results with lower ambition. Instead, OKRs should be used as reflective tool that can gradually become a method for evaluation, but start in a low-threshold format.

The findings suggest that OKRs should not be directly viewed as a complete transformation tool, but as a modular, lightweight framework to be piloted in select teams. When introduced with sensitivity to context and with the right framing, OKRs can evolve into a valuable structuring method for both short- and long-term, non-routine work, an area of growing strategic importance for Van Oord.

5.3 Perceived Advantages and Limitations of OKRs

The interviews and literature review together reveal that OKRs offer several potential benefits for organisations like Van Oord, while also presenting structural and cultural challenges that must be carefully considered before implementation.

5.3.1 Advantages

A commonly cited benefit among interview participants was the potential of OKRs to improve strategic alignment and goal visibility. In Ocean Health and Net Zero, OKRs were seen as a tool that could help clarify how team-level initiatives contribute to broader strategic ambitions. This aligns with literature suggesting that OKRs create alignment by connecting daily activities to higher-level goals (Doerr, 1999; Niven & Lamonte, 2017).

Participants also valued the transparency and ownership that OKRs can encourage. The public nature of OKRs and their bottom-up formulation process were viewed as enablers of autonomy

and engagement, especially in knowledge-driven environments. This resonates with findings in Goal-Setting Theory and Self-Determination Theory, which associate well-formulated goals with increased motivation, especially when individuals perceive the goals as crucial for the company (E. A. Locke & Latham, 1991; Ryan & Deci, 2000).

Another perceived advantage was the simplicity and adaptability of the OKR format. Unlike formal reporting templates or performance contracts, OKRs were seen as lightweight and flexible, making them suitable for environments where outputs and deliverables evolve over time. In departments with exploratory mandates, such as Digishape, this flexibility was viewed as particularly valuable.

5.3.2 Limitations and Concerns

Despite the enthusiasm, several participants raised concerns about the practical feasibility of OKRs. The most frequently cited issue was time and capacity constraints. Teams already face heavy reporting loads and shifting priorities, leaving limited room to adopt additional frameworks, even those perceived as useful. This barrier is consistent with critiques in the literature, which note that OKRs can become performative or neglected if not embedded into existing work rhythms (Butler et al., 2024).

There was also scepticism about the applicability of OKRs to long-term, complex, or uncertain goals. In the Net Zero case, for instance, respondents questioned whether the quarterly iteration of OKRs would be realistic for slow-moving initiatives or interdepartmental objectives that evolve over multiple years. This concern reflects a tension between the short-cycle nature of OKRs and the long strategic horizons that Van Oord faces.

Finally, some participants expressed concern about cultural fit. In technical teams that value autonomy and pragmatism, there is a risk that OKRs could be perceived as managerial overreach or as ‘just another reporting tool.’ This points to the importance of co-designing OKRs with teams, rather than imposing a top-down structure, to ensure relevance and buy-in.

5.4 Research Limitations

This research is subject to several limitations.

5.4.1 Reflections on Methodology

While the synthesis of literature and case data provides a well-rounded view of the feasibility of OKRs at Van Oord, it is important to acknowledge the methodological boundaries of this research. These limitations are categorized below into internal and external considerations.

Internal Limitations

First, the scope of empirical data is limited to 11 interviews across three use cases. Although these use cases were selected for their strategic relevance and diversity, the data collection process relied on convenience sampling, participants were chosen based on their availability and accessibility to the researcher. While this enabled timely access to relevant stakeholders, it may have introduced selection bias or omitted perspectives from less visible teams.

Second, the research was conducted within a finite timeframe and without longitudinal observation, which limits the ability to assess implementation dynamics over time. The study offers an evaluation of OKR feasibility, rather than an implementation analysis. A longitudinal design could provide further insights into behavioural changes or sustained effects.

Third, the study followed a parallel design, in which the literature review and interviews were conducted simultaneously. This meant that the literature informed the interview structure only partially; a sequential approach might have enabled a more structured theoretical framework and sharper questioning. However, the parallel approach also supported flexibility, allowing new themes to emerge organically and be iteratively compared against academic concepts.

Lastly, while the success factors and barriers identified in the literature were systematically compared to the empirical findings, this process involved construct validation challenges typical of qualitative research. As Van de Ven (2007) notes, interpreting real-world narratives into abstract constructs - such as “alignment” or “ownership” - requires analytical judgement. To support construct

validity, the interview format included a gradual shift from descriptive to reflective questions, helping the researcher test whether conceptual themes resonated with participants' lived experience.

External Limitations
The findings, though grounded in detailed case analysis, are not fully generalisable due to the limited sample size and the specific organisational context. Van Oord employs nearly 6,000 people across numerous global departments, and this study focused only on three use cases based in the Netherlands. As such, the conclusions are most relevant for teams operating within similar innovation- or sustainability-oriented departments in Rotterdam and Gorinchem.

Nonetheless, the results may still hold relevance for other departments within Van Oord and comparable firms in the marine engineering sector, especially where cross-functional coordination and strategic alignment are ongoing challenges. Broader generalisation to other industries should be made with caution, and only when comparable organizational characteristics - such as project-based work, long lead times, and interdisciplinary complexity - are present.

5.4.2 Theoretical and Practical Implications

From a theoretical standpoint, this study contributes to the understanding of how OKRs function in non-tech, engineering-focused environments. While much of the existing literature focuses on agile or software-driven organizations, this research adds nuance by showing how OKRs can be adapted to project-based, capital-intensive sectors. The case of Van Oord suggests that OKRs can be useful in structuring non-routine work, aligning cross-functional efforts, and making long-term strategic goals more actionable and transparent across departments.

In addition to comparing empirical findings with existing literature, this research contributes to the scientific understanding of OKRs in several ways. First of all, it addresses a clear gap: while most studies focus on OKR adoption in software, start-ups, or agile-driven organizations, few examine its applicability in asset-based, project-driven organisations. By exploring how OKRs are perceived within Van Oord's sustainability and innovation initiatives, the study examines on how OKRs can be adapted to hybrid environments that combine long project cycles with cross-functional and exploratory work. Secondly, the research contributes by identifying contextual implementation factors specific to this sector, such as tooling integration, team autonomy, and long-term outcome, which are underrepresented in the current OKR literature. Finally, the development of Table 11, a visual synthesis of design considerations for OKR implementation in complex organizations, offers a practical and transferable framework that can inform both future research and persons facing similar challenges.

Practically, the findings offer guidance to Van Oord and similar companies considering OKR implementation. Rather than a one-size-fits-all rollout, OKRs should be introduced in a targeted, experimental manner, particularly in innovation or sustainability-focused teams. Integration with existing tools, flexibility in goal cycles, and local ownership will be key enablers.

5.5 Answers to Sub Question 3

The findings of the discussion were used to answer the third research sub question SQ3:

"To what extent do the case study findings align with the insights from the literature review?"

At a high level, the motivations for OKRs observed at Van Oord align closely with those found in the literature. Both point to the need for better strategic alignment, knowledge visibility, and cross-functional coordination. But the case study adds important nuance: it highlights why these benefits are so hard to achieve in an asset-based and project-driven organisation.

The divergence lies in the operational and cultural context. Much of the literature assumes flat, agile environments where quarterly goal cycles and centralized dashboards are easily absorbed. In contrast, Van Oord's work is shaped by long project lifecycles, technical constraints, and semi-autonomous departments. These conditions make a traditional OKR rollout unlikely to succeed without adaptation.

The alignment, then, is at the level of purpose, but not at the level of method. Van Oord's context requires OKRs to be simplified, decoupled from rigid cycles, and embedded in familiar tools.

The case study demonstrates that where teams are already experimenting with OKR-like formats, such as Ocean Health's Excel templates, there is a natural entry point. This confirms a broader insight from the literature: OKRs work best not when imposed from the top, but when they emerge as solutions to real coordination problems. However, in order to realize OKRs as a single streamlined reporting structure throughout the company, there needs to be a directive from top level management.

Therefore, while the case study reinforces the core arguments for OKRs, it also refines them. It shows that successful adoption depends not just on what OKRs are, but on how closely their design aligns with organizational maturity, team identity, and existing rhythms of work.

6 Conclusions

This research aimed to determine whether OKRs could meaningfully support Van Oord's strategic ambitions, particularly in the areas of alignment, transparency, and innovation. To investigate this, a systematic literature review was conducted alongside a qualitative case study of three to Van Oord related use cases: Ocean Health, Net Zero Emissions, and Digishape.

6.1 Answer Main question

The research sub questions have been answered at the end of their corresponding chapters. The main research question can now be answered:

"What is the added value and feasibility of implementing OKR frameworks at marine engineering contractor Van Oord?"

The findings show that OKRs can offer real benefits, especially for use cases that operate outside of rigid project cycles or that span multiple departments, such as Ocean Health, Net Zero Emissions, and Digishape.

In these contexts, OKRs help bring clarity to long-term strategic goals by breaking them down into short-term, actionable objectives. This is particularly useful in initiatives that are forward-looking and innovative but lack a clear structure for tracking progress. Interviewees felt that OKRs could improve focus, ownership, and alignment - not only between leadership and teams, but also across departments working on similar goals. These benefits reflect what's seen in the literature: OKRs help teams navigate complexity by creating a shared understanding of priorities.

That said, the feasibility of OKRs across Van Oord is highly dependent on the setting. The company's engineering-driven culture, long-term projects, and decentralized structure mean that OKRs will not work everywhere or at least not in the same way. Some teams, especially those with fixed deliverables or heavy regulatory constraints, may see OKRs as unnecessary or less relevant to their day-to-day work. There is also awareness that introducing a new working method takes time and energy, and that has to be weighed against existing workloads and timelines.

Importantly, existing tools - such as PowerBI dashboards, tender planning documents, and reporting templates - are not seen as obstacles to OKR implementation. In fact, participants viewed them as useful platforms to potentially integrate OKRs into existing working routines. Rather than replacing current systems, OKRs can act as a lightweight strategic overlay, adding purpose and coherence to the work already being done. This compatibility increases the likelihood that OKRs can be adopted without adding administrative burden.

Another major strength of OKRs is their ability to support reflection and learning. Because the framework encourages teams to check in regularly, evaluate their progress, and adjust their goals, it can help encouraging a culture of adaptive strategy-making and continuous improvement, something especially valuable in fast-changing areas like sustainability and digital innovation.

Still, OKRs are not a one-size-fits-all solution. Their success depends on a few key conditions: teams need a certain level of autonomy, time to reflect, and a willingness to experiment with new ways of working. Cultural fit matters too, some participants noted that OKRs might feel unnecessary or forced if introduced without clear relevance to their context.

For this reason, OKRs are most feasible when rolled out selectively and gradually. The most promising approach is to start with pilot teams that are already open to new methods; teams that are exploring strategic planning or facing coordination challenges that OKRs could help solve. If these pilots work well, the practice can grow naturally across the organization, supported by local enthusiasm. However, the decision to adopt OKRs throughout the organisation must ultimately be endorsed by executive directors.

In summary, OKRs can bring real value to Van Oord by helping teams align complex, cross-functional work with the company's long-term ambitions. But to succeed, they need to be introduced carefully: tailored to the local context, integrated with existing tools and systems, and co-developed with the people using them. Their simplicity and flexibility make OKRs a strong fit for today's challenges, but their impact will depend on how thoughtfully they are applied in practice.

6.2 Recommendations

Based on the synthesis of findings, the following recommendations are offered to Van Oord:

- Pilot OKRs can be set up in strategically relevant teams, such as Ocean Health or Digishape. These pilots should be initiated by team leads or programme managers in close collaboration with a central department, such as the Sustainability Department or E&E. This dual ownership ensures that pilots are both locally relevant and strategically aligned. Lessons learned from these pilots can then lead to gradual scaling or adaptation in other teams.

- Co-design the OKR structure with team members to ensure buy-in, cultural fit, and contextual relevance. The initiative for this co-design process should come from team leads or department heads, ideally supported by someone in an enabling role, such as a sustainability coordinator, innovation lead, or an internal OKR “champion.” These facilitators can provide guidance or templates, while leaving room for each team to adapt the framework to their own work rhythms and language. This bottom-up approach reduces the risk of OKRs being perceived as top-down control mechanisms and instead frames them as tools for ownership and shared direction.

- Keep the tooling lightweight and familiar. Consider integrating OKRs into existing systems like PowerBI, or weekly planning templates rather than introducing a new software platform just for OKRs.

- Decouple OKRs from performance evaluation, particularly during early phases, to protect psychological safety and encourage ambition and experimentation.

- Provide training and facilitation support, especially for team leads and initiative owners who may need guidance on drafting objectives, defining key results, and facilitating check-ins.

- Start with flexible goal cycles rather than stiff quarterly reviews, and align OKR reviews with existing departmental rhythms or project milestones.

These steps will help ensure that OKRs are seen as a practical tool for alignment and learning, not as an administrative burden.

6.3 Suggestions for Future Research

Several suggestions for future research can given based on the results of this study:

- Longitudinal research is needed to assess the actual impact of OKRs on team alignment, performance, and engagement over time. Tracking pilot teams across multiple goal-setting cycles would offer valuable insight into behavioural and organizational outcomes.

- Quantitative studies could complement this work by measuring OKR completion rates, reporting efficiency, or alignment scores before and after implementation.

- Comparative studies across departments or industry peers could reveal how OKRs perform in different organizational structures or cultures, particularly in engineering, infrastructure, or capital-intensive sectors.

In addition to scaling and validating the current findings, several content-driven questions came forth during this research that require further investigation:

- How can OKRs be adapted to long-term, non-linear goals?
  Several participants, particularly in the Net Zero Emissions use case, expressed concern that OKRs may not be suitable for strategic goals with long lead times, complex dependencies, or uncertain outcomes. Future research could explore how OKRs can be meaningfully applied

in contexts where quarterly or binary progress measures fall short, such as in sustainability transitions, systems innovation, or infrastructure planning.

- What is the impact of OKRs on team dynamics and autonomy?
  While many participants valued the structure that OKRs offer, there was also concern that they might clash with Van Oord's practical, autonomy-driven culture. Future studies could explore how teams balance individual ownership with alignment when using OKRs, and whether OKRs impact psychological safety and initiative in technical environments.

- How do OKRs interact with existing reporting and planning systems?
  A recurring question across departments was how OKRs would relate to tools already in use, such as Excel trackers, tender planning documents, or PowerBI dashboards. Future research could investigate the risks and benefits of implementing OKRs onto existing systems, and whether integration supports or complicates reporting clarity.

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8 Appendices

8.1 Appendix A: Interview Guide

Opening

1. What is your current role within the use case?

(This question is only intended to provide contextual understanding; personal details will not be included in the final thesis.)

2. Short introduction by the researcher

A brief explanation of the research objective and the OKR methodology is provided, including a concrete example of a well-formulated OKR. This ensures a shared understanding among all participants.

Section 1: Departmental Vision and Strategic Alignment

3. How would you describe the vision or mission statement of your case?
4. What measurable factors or results would indicate that this vision is being achieved?
5. How does this vision relate to Van Oord's broader mission?

Section 2 : Project or Subdomain Focus

6. Could you briefly describe the initiative or project you are currently involved in?
7. What are the most important measurable outcomes or deliverables for this initiative?
8. Over what time horizon should these results be achieved?
9. What challenges do you currently face in tracking progress or reporting results for this project?

Section 3: Current Practices and the Potential Use of OKRs

10. To what extent is there a need for more clarity or transparency around ownership of tasks or initiatives?
11. How often do you have the opportunity to revise or reframe your main objectives or expected outcomes?
12. How are individual or team goals currently tracked within your department?
13. What changes would be needed to improve this process?
14. How would you envision tracking OKRs within your team?
15. What aspects do you find promising or less suitable?
16. What role do you think OKRs could play at Van Oord?
17. And more specifically, within your use case?
18. If you were to introduce OKRs to your colleagues, how would you go about it?
19. How would you prefer to learn more about OKRs or begin experimenting with them yourself?
20. In your view, how does goal-setting influence your effectiveness or efficiency in your work?
21. Finally, how would you formulate an Objective and corresponding Key Results for the project or domain you just described?

8.2 Appendix B: SLR Findings

Study ID	Reasons for OKRs	Challenges	Success factors	Results/Impact	Relevance to Van Oord
AS23	Improving strategic alignment and accountability	Resistance to change; Lack of training; Subjectivity	Leadership commitment; Feedback cycles; Recognized potential	Improved alignment between goals and efforts; Focus on measurable outcomes	Parallels in aligning goals across departments.
T19	Non-Quantifiable goals; Improving strategic alignment	Difficulty in defining OKRs; High number of initiatives	Stakeholder Engagement; Feedback cycles; Combination with GQM+ strategies	Improved alignment between goals and efforts; Iterations helped reduce inefficiencies	Challenges for technology-driven departments; Combination OKRs and existing methods.
V21	Improve alignment in and between teams; Increasing transparency	Difficulty in defining OKRs; Lack of OKR expertise; Over-reliance on workshops	Regular OKR workshops; Cross-Team Visibility; OKR Tracking tool; Leadership and Product Owner Support	Better alignment of objectives across teams; Stronger sense of ownership among team members; Increased transparency	Managing dependencies and aligning teams; the need for structured coordination frameworks.
L23	Lack of measurable Goals; Improving Self-Reflection and Accountability	**N/A***	Goal-setting workshops and regular check-ins;	Increased self-reflection and accountability; Students Improved in data-driven goal setting	The principles of structured goal setting, progress tracking, and self-reflection are transferable to Van Oord.
KC19	Enhancing active knowledge sharing;	Cultural Resistance; Concerns compatibility with staff lacking creativity	Leadership support; Training and resources	More structured and active knowledge-sharing; positive perceptions regarding usefulness, ease of use, trust, and intention of OKRs	-
ZB23	Managing organizational alignment; Replacing MBO methods; Encouraging employee engagement	Maintaining commitment; Balancing OKRs; Over-complication of OKRs	Leadership Commitment; Involvement at all levels; Transparent tracking mechanisms; Iterative learning	Improved strategic alignment; Stronger team collaboration; Improved accountability; Risk of bureaucratization	OKRs can be adapted for large-scale, project-driven industries; Agile working methods.
G24	Improving strategic alignment; Enhancing Data-Driven Decision-Making	Employee resistance; Deploying AI within OKRs requires robust data	Leadership and Strategic Support; Scalability through AI automation;	Real-time analytics improve decision-making; Increasing visibility and generating alignment; Biases in AI models	-
C24	Improving company performance; Increasing employee satisfaction:	Employee resistance to change;	Aligning OKRs with employee development; Cross-industry adaptability.	OKRs enhanced employee engagement; OKRs worked better in some organizational cultures than others, requiring adaptation.	-

R24	Traditional KPI systems are often misaligned; To boost autonomy and motivation; Enhance strategic focus	Lack of clarity and consistency; Uneven adoption across roles	Employee Autonomy; OKRs not directly tied to rewards	Improved acceptance of performance measures; Improved alignment; Helped correct issues in target-setting	Larger firms tended to run OKRs in parallel with KPIs, sometimes undermining the benefits.
RT24	To overcome the limitations of KPIs and MBOs; Increase evaluation moments	Collaboration is dependent on culture, not OKRs;	OKRs not tied to rewards; Employees felt alignment to organisational goals.	OKRs support employee collaboration and team performance; OKRs support innovation.	OKRs are most effective when supported by culture and clear communication structures.
S22	Lack of alignment across teams; Difficulty tracking progress; Need for structure	Confusion about OKR purpose; No formal training	Top-down and Bottom-up approach; Training and mentoring; Feedback loops	Increased team focus and efficiency; Improved alignment; Extra work	Varying levels of experience and leadership engagement.
K22	To develop and monitor the organization's strategy;	Lack of linkage to financial outcomes; Insufficient strategic consistency	The use of consistency and performance tests; Regular checkpoints	Creating awareness of gaps between goals and impact; Brings structured validation;	Framework for general use in dynamic, complex organizations.
SS23	Because of popularity of OKRs in the industry.	Difficulty in defining good OKRs; Subjectivity and confusion	Training and workshops; Leadership support; Cultural fit.	Improved alignment and motivation; Enhanced transparency and focus; Better communication and responsiveness.	The application in project-driven and innovation-focused contexts makes this paper relevant to Van Oord.
T20	Improving strategic alignment.	Departmental misalignment; Siloed work cultures;	Inclusive Participation; Leadership commitment; Training and workshops.	Improved strategic alignment; Shared understanding of vision and strategy; Clarity on how individual contributions affect overall goals.	The alignment strategies - OKR implementation and stakeholder co-creation - are highly transferable.
ER23	To define and control the strategic and tactical transformation; For project management.	Time and resource intensity	Defined rules and roles for OKR governance; Emphasis on training and skill building	Enabled a clear structuring of objectives; Supported iteration and goal updating.	Addresses complex, multi-phase engineering projects; emphasis on digital tools and cross-functional teams.
MG24	To simulate industry-standard performance tracking and goal alignment.	Difficulty defining good OKRs; Some OKR tools were difficult to navigate	Peer mentorship; Use of feedback loops and retrospectives;	Improved engagement, accountability, and clarity; Facilitated development of soft skills; OKRs linked to measurable progress	The OKR system replicated structures used in technology-driven engineering firms.
B24	Improve strategic goal alignment; Improve clarity and cohesion.	Difficulty defining OKRs; Data access and tracking;	Middle management was identified as key; Training for	Improved employee engagement, creativity, enjoyment, and alignment with	The challenges and solutions are translatable to any complex,

		Difficulties in collaboration and clarity.	managers and OKR leaders; Standardized tooling; Mentoring.	strategy; Higher psychological safety and reduced turnover intent.	distributed, project-driven organization.
O24	Improve strategic goal alignment; Enhance transparency and accountability	Strategic alignment complexity;	Integration with strategic tools; combination with sensitivity analysis.	Supporting strategic clarity; make alignment between goals and operations more measurable; Feedback loops	The model's versatility - including OKRs, agile strategy cycles, and multi-perspective analysis makes it relevant.
SK21	To address unclear performance targets; lack of visibility	Difficulty adjusting plans mid-sprint; Manual OKR scoring and tracking overhead	Integration of OKRs into all Scrum stages; Adaptability; Promoting fairness and learning through scoring.	Improved deliverable performance; Enhanced collaboration visibility and prioritization clarity; clearer goal alignment.	Combines project-based delivery with regulated environments.
H23	Increase strategic alignment; improving transparency and motivation.	Implementation frameworks were incomplete; Lack of support for soft success factors.	Implementation of the organizational strategy; Well-defined OKRs; communication management.	Improved strategic clarity; Better goal alignment; Increased employee motivation and performance awareness.	The study covers frameworks from a range of sectors, explaining the need for a customizable OKR-implementation framework.

8.3 Appendix C: Participant OKRs

Candidate A:

Objective	**Integrate energy and emissions initiatives into Van Oord's strategy with a focus on financial viability and transparency.**
KR1	Ensure a technical approach to counteract greenwashing and maintain credibility in energy transition initiatives.
KR2	Develop a framework for evaluating potential return on investment (ROI) and return on capital employed (ROCE) for energy and emissions projects.
KR3	Increase transparency on financial impact, assessing whether all energy and emissions initiatives generate revenue, now or in the future, and determining their long-term viability.

Candidate B:

Objective	**Develop and implement a strategic climate transition plan to ensure Van Oord meets its 1.5°C-aligned net zero targets.**
KR1	Standardize **emission calculations and reporting**, ensuring full transparency across Scope 1, 2, and 3 emissions**, maintaining the highest CDP score** among competitors.
KR2	Establish **Science-Based Targets (SBTs)** for Scope 1, 2, and 3 emissions, aligning Van Oord's decarbonization pathway with the **Paris Agreement's 1.5°C goal** and submit for SBTi validation.
KR3	Develop and integrate a **Climate Transition Plan**, detailing strategies for staying within emission targets across **Scope 1 (fleet), Scope 2 (electricity usage), and Scope 3 (supply chain),** in collaboration with key departments (SMD, Procurement, E&E, and Supply Chain).

Candidate C:

Objective	**Ensure the availability of green molecules in the supply chain through volume bundling and strategic agreements.**
KR1	Measure the **number of parties actively contributing** to the volume bundling initiative.
KR2	Determine **Van Oord's share** in the total volume bundling effort.
KR3	Track the **amount of secured volume** in the market through offtake agreements.

Candidate D:

Objective	**Support tenders and projects in achieving sustainability through emission reduction initiatives.**
KR1	Structure sustainability efforts into three workstreams: **Technology, Energy, and Governance**, involving Corporate, E&A, Procurement, and SMD.
KR2	Conduct **Electro Equipment Power & Performance Data Analyses** to optimize battery and machinery efficiency using project data.
KR3	Develop knowledge on **biofuel optimization for seagoing vessels**, ensuring ship-specific adaptations for effective use.
KR4	Establish clear emission reduction targets: **96% Scope 1 reduction by 2050**, **100% renewable electricity for Scope 2 by 2030**, and **90% Scope 3 reduction by 2050**.
KR5	Contribute to **knowledge development through Menens platform**, exploring future methanol applications for current investments.

Candidate E:

Objective	**Enhance Van Oord's ability to comply with ESRS E1 standards for CO_2 emissions reporting in its upstream value chain.**
KR1	**Identify weaknesses in current data collection methods** and propose enhancements to align with ESRS E1 standards, including the use of new technologies for improved accuracy.
KR2	Assess the roles of stakeholders in emissions reporting and recommend strategies for **improving collaboration with suppliers and regulators** to ensure compliance.
KR3	Examine the necessity of **adapting procurement and supplier relationships to new sustainability requirements and suggest measures** to transition from a transactional to a strategic supplier relationship model.

Participant F:

Objective	**Strengthen DigiShape's mission alignment and secure a sustainable project portfolio.**
KR1	Assess whether **partners still endorse DigiShape's mission** and how they translate it into concrete goals for the next 6–12 months.
KR2	Develop a **project portfolio worth €20 million** within two years.
KR3	Establish at least **seven large-scale projects (€2–3 million each)** by securing funding from multiple stakeholders, including Rijkswaterstaat.

Participant G:

Objective	**Develop a collaborative community for sharing knowledge in water management to improve efficiency and digitalization.**
KR1	Facilitate the **creation and sharing of new knowledge** to enhance efficiency in water management.
KR2	Deliver **IT components and systems** that improve or simplify work processes.
KR3	Actively contribute **financially and with capacity** to support smarter and more efficient working methods in the water sector.

Objective	**Develop a collaborative community for sharing knowledge in water management to improve efficiency and digitalization.**
KR4	Promote **open-source systems and data sharing**, ensuring all DigiShape-developed tools are available to partners.

Participant H:

Objective	**Drive the digitalization of water management in the Netherlands, with a strong focus on water safety and infrastructure.**
KR1	Establish a **baseline for digitalization progress**, enabling measurement of changes and improvements.
KR2	Develop and implement **digital tools such as Digital Twins.**
KR3	Expand **digitalization efforts in water management**, ensuring continuous advancements in water safety and infrastructure.

Participant I:

Objective	**Facilitate seamless digital information exchange between contractors and clients within DigiShape.**
KR1	Identify and document **existing methods of data exchange** in at least **two projects** within Van Oord and across DigiShape partners.
KR2	Engage **all 12 DigiShape partners** to contribute **2-3 examples** of data exchange methods, leading to a collection of approximately **36 approaches**.
KR3	Evaluate and shortlist **effective data exchange methods** based on partner feedback, creating a **shared library of best practices** within DigiShape.

Participant J:

Objective	**Establish a market for stand-alone ecological projects and integrate large-scale execution capabilities.**
KR1	Measure and track **revenue generated** from ecological projects as a key business indicator.
KR2	Identify **key market areas** where Ocean Health can contribute and create impact, leading to strategic decision-making on focus areas.
KR3	Develop and implement a **scalable approach** to apply contractor skills in the ecologically driven sector, bridging the gap between science and execution.

Candidate K:

Objective	**Ensure structured quarterly planning for IT teams, aligning deliverables with formulated objectives.**
KR1	Each IT team defines a **quarterly planning breakdown** with a set of deliverables aligned with objectives formulated by program managers, team leads, and tech leads.
KR2	Teams **prioritize deliverables** and describe their activities accordingly.
KR3	Identify **dependencies between teams**, specifying in which iteration deliverables take place and how they interconnect.
KR4	Translate dependencies into a **dependency matrix** for management and coordination.