



Proposed Business Strategy to Ensure Continuity in Construction Company (Study Case of PT Rekayasa Industri)

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ABSTRACT: PT Rekayasa Industri (Rekind) is strategically shifting from Engineering, Procurement and Construction (EPC) to Operations and Maintenance (O&M) to improve financial stability and operational efficiency. This study explores reasons behind Rekind's financial difficulties despite undertaking numerous large-scale projects and examine the strategic steps required for a successful transformation. Using Soft System Methodology (SSM) to analyse qualitative data collected through interviews, developing a comprehensive understanding of the organizational, financial, legal and operational complexities involved. The study identifies key transformation steps, including restructuring organizational framework, enhancing risk management practices, and fostering long-term relationships. The proposed transformations aims to achieve better financial performance, increased efficiency and a more sustainable business model, ensuring Rekind's future growth and stability.

KEYWORDS: Engineering, Procurement and Construction (EPC), Operation and Maintenance (O&M), Strategic Transformation, Financial Stability, Operational Efficiency, Risk Management and Soft System Methodology (SSM)

I. INTRODUCTION

The development of infrastructure such as roads, bridges, airports, harbors, power plants, and other infrastructure is one of the driving elements of national economic growth. The existence of adequate and functional infrastructure is essential to accelerate economic development, while inadequate infrastructure, characterized by poor quality and lack of maintenance, can hinder economic growth (Anisatul, 2022). During President Joko Widodo's administration, infrastructure development became one of the five elements in achieving the Golden Indonesia 2045 as stated in the National Medium-Term Development Plan (RPJMN) 2015-2019 and RPJMN 2020-2024. However, the construction industry in Indonesia experienced a decline in growth of 5.0% in the period 2010 - 2022 due to the COVID-19 pandemic (Fachriansyah, 2020). The government's postponement of major projects and diversion of infrastructure budgets to pandemic response exacerbated the situation (Parama, 2020). This situation also affected state-owned construction companies such as PT Waskita Karya (Persero) Tbk, PT Hutama Karya (Persero), PT Wijaya Karya (Persero) Tbk, PT PP (Persero) Tbk, and PT Adhi Karya (Persero) Tbk, which experienced a significant increase in debt.

In the face of this situation, this study aims to analyse the Debt to Equity Ratio (DER) of several construction companies listed on the Jakarta Stock Exchange (IDX) and identify strategies that can be implemented by PT Rekayasa Industri (Rekind) after restructuring to improve operational and financial stability. In addition, this research also aims to evaluate the potential impact of the proposed strategic measures on Rekind's future performance. The focus of this research is on both practical and theoretical aspects relating to the restructuring of PT Rekayasa Industri (Rekind). Practically, this research aims to provide strategies that can be implemented by Rekind to improve operational and financial stability post-restructuring. From a knowledge perspective, this research contributes to the literature on corporate restructuring, financial crisis management, and strategic business transformation.

The approach used in this research involves analyzing data from the company's annual reports, applying crisis management theory, and restructuring strategies. The data used covers the period 2018-2022, focusing on the analysis of solvency ratios and Debt to Equity Ratio (DER). This method allows the identification of the main causes of financial losses and the development of relevant and implementable restructuring strategies. The results of this study are expected to make a significant contribution to the existing body of knowledge regarding financial crisis management and corporate restructuring. The findings also have practical implications for other construction companies in facing financial and operational challenges, as well as providing insights for stakeholders in strategic decision-making.

Currently, PT Rekayasa Industri (Rekind) is facing a complex financial situation that has raised serious concerns about its operational sustainability and future growth prospects. This challenging situation is mainly due to several financial aspects that have



created a distressed financial condition for the company. Over the five-year period, Rekind's liabilities showed fluctuations, increasing from 9.2 trillion in 2018 to peak at 13.4 trillion in 2021, before declining slightly to 12.4 trillion in 2022. On the other hand, the company's equity is consistently negative, worsening from -1.3 trillion in 2018 to -6.8 trillion in 2022. This pattern indicates a potential threat to Rekind. The widening gap between liabilities and equity indicates an increasing reliance on debt, potentially indicating serious operational or financial problems.

The results of this study are expected to contribute significantly to the existing body of knowledge regarding financial crisis management and corporate restructuring. The findings also have practical implications for other construction companies in facing financial and operational challenges, as well as providing insights for stakeholders in strategic decision-making. As such, this research aims not only to address Rekind's current financial problems but also to provide guidance for other companies facing similar challenges in the future. This is important to ensure that the construction industry can continue to thrive and contribute significantly to national economic growth.

II. LITERATURE REVIEW

A. Business Strategy

Business strategy is a detailed plan or roadmap that outlines a company's goals and the means to achieve them (Vishnevskiy et al., 2016). It provides a framework for decision-making and resource allocation, aligning an organization's operations with its long-term goals. It consists of a methodical process for setting goals, evaluating the internal and external environment, and developing a plan to gain a sustainable competitive advantage. One of its important roles is to drive coherence and alignment among different functional areas and levels of the organization, ensuring everyone involved in the transformative effort understands and works towards the same goals. Business strategy helps priorities projects, distribute resources efficiently, and determine where to focus efforts for transformative change. Porter's Generic Strategy, as described by Michael Porter, offers a framework for gaining and maintaining competitive advantage through cost leadership, differentiation, and focal strategies (Bindra et al., 2019).

B. Strategic Management Process

The strategic management process is a systematic and comprehensive approach to developing, implementing, and assessing strategies to meet organizational goals and objectives (Fuertes et al., 2020). The process involves setting goals, assessing the internal and external environment, creating action plans, and evaluating performance to ensure strategic alignment. The process supports business transformation by providing the strategic direction and vision required for change initiatives, helping organizations identify the need for transformation, evaluate its scope, and set goals. Michael Porter's Five Forces framework is fundamental to strategic management, analyzing industry competitiveness through five key elements: threat of new entrants, bargaining power of buyers, bargaining power of suppliers, threat of substitutes, and intensity of competitive rivalry (Bruijl, 2018). These forces collectively influence the attractiveness, profitability, and competitive dynamics of an industry, guiding strategic decision-making by highlighting barriers to entry, the influence of buyers and suppliers, the availability of substitutes, and the level of competitive intensity.

C. Organizational Change and Transformation Theory

Organizational Change and Transformation theory explores how organizations adapt to dynamic environments through planned and spontaneous change (Burke, 2017; Cummings & Worley, 2021). The theory emphasizes the processes, strategies and factors that influence successful change, driven by both internal and external factors (Daft, 2018; Jones, 2013). Organizational culture plays an important role, with changes that align with cultural values more likely to be accepted (Cameron & Quinn, 2011; Schein, 2017). Evaluating the effectiveness of change is critical for continuous improvement, using performance metrics, employee surveys, and impact analyses (Burke, 2017; Cummings & Worley, 2021). Digital transformation has emerged as a key driver, pushing companies towards adaptable organizational design (Hanelt et al., 2020). Transformation involves both continuity and change, with competing values generating energy that can facilitate or hinder transformation (Malhotra & Hinings, 2015). Transformational leadership significantly impacts change management, correlating positively with employee commitment and negatively with resistance (Peng et al., 2020; Anandani & Aslami, 2023). Learning processes, both individually and collectively, are critical to integrating change (Alas, 2017). Finally, sustainable transformational change strategies, such as enabling significant small wins and overcoming stagnation, are essential for long-term adaptation (Termeer et al., 2017).



D. Risk Management Theory

Risk Management theory focuses on the identification, assessment, and management of risks in an organizational context, aiming to minimize the negative impact of unexpected events while optimizing opportunities arising from uncertainty (Hopkin, 2018; Ostrom & Wilhelmsen, 2019). The theory emphasizes a systematic process involving risk identification, analysis, evaluation, handling and monitoring (ISO, 2018; McNeil et al., 2015). The theory also highlights the importance of developing a risk-aware culture where responsibility is embedded at every level of the organization (Hillson, 2016; Wu et al., 2014). Risk Management Theory considers different types of risks, including strategic, operational, financial, and reputational risks, and their interrelationships (Fraser & Simkins, 2016; Sax & Andersen, 2019). Its application spans various sectors, such as finance, healthcare, construction, and IT, recognizing the unique characteristics of each sector (Aven, 2016; Haimes, 2015).

Despite its benefits in improving organizational resilience, the theory faces challenges such as increasing risk complexity, data and model limitations, and balancing management costs with benefits (Buchanan & Denyer, 2013; Schiller & Prpich, 2014). The theory has evolved from a techno-scientific perspective to a cognitive, socio-cultural, and constructivist perspective, which views risk through the lens of sense making due to complex information and time constraints (Taarup-Esbensen, 2018). Criticism of traditional statistical methods for their limited applicability to new technologies has led to a shift towards autonomous systems theory, which focuses on system controllability as a measure of risk (Gołębiewski et al., 2022). This broader understanding of risk is relevant in finance, corporate management and safety, which view risk as purely negative or speculative with both negative and positive impacts (Hayashi & Kamei, 2020). Theories such as agency theory, corporate behavior theory, prospect theory, behavioural agency models, and upper echelon theory provide insights into managerial risk-taking in uncertain environments, challenging conventional views of risk strategies (Hoskisson et al., 2017). Together, these insights contribute to a dynamic understanding of Risk Management Theory and its application across multiple domains and contexts.

E. Financial Management Theory

Financial Management Theory is a comprehensive framework that aims to optimize shareholder value through strategic financial decisions, which include investment, financing, and dividend decisions (Brigham & Ehrhardt, 2020; Gitman et al., 2018). Investment decisions emphasize the selection of investment projects with a positive Net Present Value and a rate of return that exceeds the cost of capital (Brealey et al., 2020; Ross et al., 2021). Funding decisions involve determining the optimal capital structure by balancing debt and equity to maximize firm value (Damodaran, 2015; Welch, 2017), while dividend decisions address the distribution of income to shareholders versus reinvestment in the firm (Baker & Weigand, 2015; DeAngelo & DeAngelo, 2018). The theory also incorporates risk, market liquidity and market efficiency considerations in decision-making (Bodie et al., 2021; Fama & French, 2015), and recognizes the impact of corporate governance and agency relationships on financial outcomes. Widely applied across industries, the Financial Management Theory has contributed significantly to improving financial performance (Gompers et al., 2003; Graham & Leary, 2011). However, the theory has faced criticism for assuming rationality, ignoring non-financial factors, and neglecting its impact on other stakeholders (Aggarwal, 2014; Biondi, 2018). In addition, its practical relevance has also been questioned due to reliance on predictive data and incompatibility with practitioners' goals and skills (Coleman, 2014). This suggests a need for future research to better integrate practical knowledge and experience into the theory, so as to improve its applicability in the real world.

F. Change Management Theory

Change management is a structured approach designed to transition an organization from its current state to a desired future state, which is critical to maintaining competitiveness in a rapidly evolving business environment. Kurt Lewin's Change Management model, one of the earliest theories, involves a three-stage process: thawing, change, and refreezing, which prepares the organisation for change, implements the transition, and solidifies the new behavior (Zand & Sorensen, 1975). John Kotter's 8-Step process builds on Lewin's model, offering a detailed roadmap that includes creating urgency and embedding change in the organisation's culture (Campbell, 2008). In contrast, the emergent and adaptive approach emphasizes flexibility and continuous adaptation, arguing that change is unpredictable and requires agility (By, 2005).

Peter Senge's concept of the learning organization integrates change management with organizational learning, promoting a culture of continuous improvement and adaptability (Hendry, 1996). Different models offer various strengths and weaknesses: Lewin's model is simple but may be too simple for complex change, Kotter's model is comprehensive but time-consuming, the



ADKAR model focuses on individual change, McKinsey's 7-S model provides a holistic view but can be complex to implement, and new approaches are highly adaptable but may lack structure. Understanding these models helps organizations choose the approach that best suits their specific needs and challenges, whether immediate change (Lewin), large-scale transformation (Kotter), individual transition (ADKAR), holistic alignment (McKinsey 7-S), or a dynamic environment that requires flexibility (emerging approaches) (Havlovská et al., 2023). Adopting principles from learning organizations can also promote long-term sustainability and innovation (Hendry, 1996).

G. Conceptual Framework

The conceptual framework diagram in Figure 1 illustrates the process of addressing organizational losses by identifying their causes, implementing restructuring measures, and achieving the desired impact. At first, it identifies the main causes of losses, such as misaligned strategy, inadequate structure, inadequate systems, incompatible shared values, inadequate leadership style, misaligned staff skills, and skill shortages. To mitigate these issues, specific restructuring measures are proposed: refining strategy, restructuring the organization, implementing robust systems, strengthening shared values, developing leadership, enhancing staff skills, and improving skills. By following these steps, organizations aim to realize positive impacts, including increased strategic focus, improved organizational efficiency, better project tracking, stronger organizational culture, effective leadership, skilled workforce, and increased competitive advantage. The framework serves as a comprehensive guide to systematically address and overcome challenges, leading to continuous improvement and competitive success (Havlovská et al., 2023).

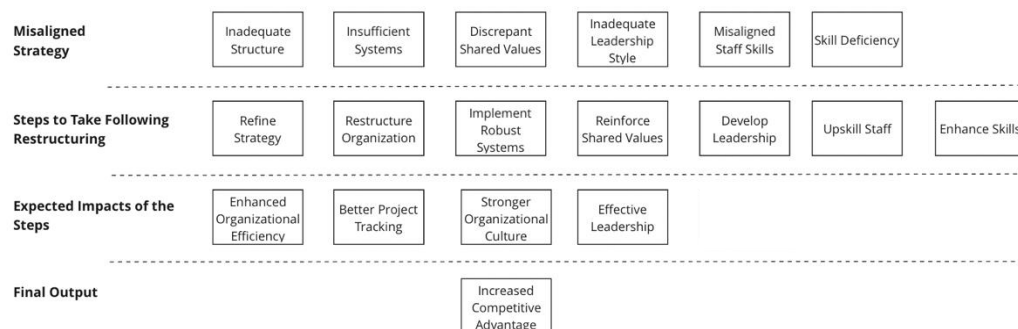


Figure 1. Conceptual Framework (Source: Author, 2024)

III. METHODOLOGY

A. Research Design

This research employs Soft Systems Methodology (SSM) to systematically investigate the operational and financial dilemmas faced by Rekind, particularly focusing on the losses incurred despite undertaking numerous large-scale projects. The initial phase involves constructing a rich picture to depict Rekind's complex operational environment, capturing elements like project management dynamics, financial transactions, stakeholder interactions, and market conditions. This visualization aims to understand the myriad factors and their interrelationships contributing to Rekind's financial losses. Following this, the second phase explores potential strategic steps for stabilizing and enhancing Rekind's financial and operational performance. Using SSM, conceptual models will be developed based on the rich picture scenarios, outlining possible interventions and their expected outcomes. These models will simulate different restructuring strategies, providing a systematic framework to evaluate their feasibility and potential impacts. The outcome will be a series of actionable steps tailored to Rekind's specific context, transforming theoretical insights into practical, implementable strategies.

B. Data Collection

Data collection in this study involved a comprehensive interview process and focus group discussions (FGDs) to gather insights from various stakeholders at Rekind. Interviews served as the primary data collection method for the initial Soft Systems



Methodology (SSM) step. These involved a diverse group of stakeholders, including Rekind executives, project managers, employees, and external partners such as suppliers and customers, to capture a range of perceptions regarding the company's operational and financial issues. Insights from these interviews helped build a rich picture that visually represented the complex interactions and processes within Rekind, facilitating the identification and definition of various systems, leading to the formulation of root definitions. Conceptual models were then developed based on these definitions to propose structured changes or improvements, simulate potential solutions and provide a basis for discussion and refinement.

In the next stage, a Focus Group Discussion (FGD) was conducted to validate and refine the conceptual model that had been developed. These sessions bring together key stakeholders who participated in the initial interviews to reach consensus on the proposed model and strategies, ensuring they are aligned with practical realities and shared expectations. FGDs critically evaluate the feasibility of the model and suggest modifications based on collective expertise and insights, ensuring the viability of the solution and increasing stakeholder buy-in.

C. Data Analysis

Data analysis in this research uses thematic analysis and Soft Systems Methodology (SSM) to interpret and answer the problems faced by Rekind systematically. Thematic analysis is a qualitative method that identifies, analyses, and interprets patterns (themes) in textual data. The process begins with recognition, where the researcher immerses themselves in the data, generating initial codes that categories the data into meaningful groups. These codes are then grouped into potential themes, which are then rigorously reviewed and refined to ensure that they accurately capture the essence of the data set and align with the research objectives. The final step was to define and name each theme and construct a narrative linking the findings to the theoretical framework and wider literature.

SSM, then, is a systematic approach used to analyze and solve complex problems in an organizational context. The application of SSM to the Rekind problem involved seven steps. The first step was to understand the problem situation in an unstructured way, gathering diverse information about the company's operations and environment. In the second step, this information was organized through root cause analysis (RCA) to identify the main causes of the company's losses. The third step involves creating a root cause definition that succinctly describes the system that needs to be improved. Conceptual models are then built in the fourth step, which outline the activities required for the system to function effectively. These models are compared to the real-world situation in the fifth step to identify gaps and discrepancies. The sixth step identifies feasible and desirable changes based on the comparison, and the final step involves developing and implementing actions to address the identified mismatches, ensuring that the solutions are tailored to Rekind's needs and capacity.

IV. RESULTS AND DISCUSSION

A. Thematic Analysis

Rekind faced various challenges and opportunities in its transition from EPC to O&M. Thematic analysis of the interviews revealed key insights into the operational and strategic challenges faced during this transformation. The Senior Risk Officer highlighted the complexities and risks inherent in the EPC business, saying, "Indeed, the EPC business is quite complex because we will look at the objectives of the EPC project, especially in terms of cost, schedule, timeline, and also quality, where all three certainly have their own risks." This complexity significantly impacts Rekind's financial performance. Effective risk management practices, aligned with ISO 31,000 standards, are essential to mitigate these risks. The officer emphasized, "The method of analysis or implementation of risk management that we do is in accordance with the ISO 31,000 standard where we do the framework and also the risk analysis process to detailed qualitative and quantitative analysis." The shift to O&M is seen as a strategic move to diversify and stabilize the company amid high uncertainty in EPC projects. "We are planning the O&M business, arguably as a risk mitigation of Rekin's own company risk," the official said, recognizing the significant opportunities and lower-risk business model offered by O&M compared to EPC projects. "The first thing we definitely look at is the legal risk, we have to look at Rekin's articles of association or bylaws as a company whether it is still suitable to run an O&M business," the officer further explained.

In line with the shift to O&M, the Legal Division underlined the significant legal and operational challenges, stating, "From a legal perspective, the first thing that needs to be done is adjustment to the business sector and adjustment to the licence." Ensuring compliance with legal requirements and managing shareholder and regulatory approvals is critical. Legal due diligence is essential to maintain a construction services license when venturing into the O&M field. The officer explained, "Regarding this licence



adjustment, care needs to be taken and legal studies or due diligence needs to be conducted to specifically ensure that a company can be licensed in the integrated construction services sector and in the O&M sector at the same time." Differences in labour regulations, contract types, and revenue recording between EPC and O&M require substantial policy adjustments. "The risk is also not as big as the risk of EPC projects, so actually in terms of handling contracts and agreements, the level will be simpler compared to EPC contracts," the official said. "So actually for projects, we have identified the risks even from the proposal stage," they said, pointing to Rekind's proactive approach to risk management.

The VP Research and Development emphasized the strategic steps required for Rekind's transformation, starting with a comprehensive business evaluation and feasibility study. "The first thing to do is to evaluate the business and its feasibility," he said. Assessing the company's competence to operate and finance O&M facilities is crucial, drawing on its extensive experience in EPC projects. "Rekin should be very capable. Why? Because Rekin built it," he says, underlining the company's capabilities. Developing a clear business plan with clear objectives, adjusting the organizational structure, and fostering collaboration with long-term clients are also important steps. The VP emphasizes, "Developing the capabilities of Rekin's employees through training to acquire skills and experience in the O&M field is very important." He added, "Then after that there is also the capability development of Rekin's employees, where previously Rekin's employees may not have had the experience or specialization for operations and maintenance."

Based on the strategic planning, the Marketing and Business Development Division revealed key differences in marketing strategies and day-to-day operations between the EPC and O&M businesses. "So indeed the stakeholders or clients for EPC and O&M as an entity are the same, but the functions that we will deal with or attract for marketing strategies are somewhat different," the manager said. Connecting with clients who prioritize efficiency and cost savings, as well as maintaining relationships with existing EPC clients while forging new relationships with O&M stakeholders, is crucial. "We had to reposition the stakeholders from being business development people to more operations and maintenance people," he explains. New key performance indicators that focus on time and cost efficiency, quality, and minimizing downtime are critical to success in the O&M sector. "For me in O&M because it's simpler, of course it's for time and cost efficiency, because there's no technology mastery, no design mastery," he explains.

The Corporate Planning Division highlighted strategic considerations for the transition from EPC to O&M. The volatility of the EPC business contrasts sharply with the stable revenue from licenses. "The EPC business outside, companies like EPC, the pattern is like that, up and down depending on global economic conditions," said the planner. Human resource readiness and expertise evaluation are crucial. "The first is the readiness of human resources, the expertise we have," he emphasized. Adjustment of compensation and benefits, thorough risk assessment, and effective transformation planning are necessary. "The first thing that must be made is the planning, so we plan where we want to transform from and to," he said. Rekind's established reputation and diverse client network provide significant opportunities to expand into the O&M field. "We already have a good name in the eyes of clients, our clients are also diverse, ranging from oil and gas, geothermal, electricity, petrochemicals, and others," said the planner.

Finally, the Finance Division underlined the critical phase of financial restructuring under PKPU, highlighting the need for strict debt management. "Rekin is or has been in the process of restructuring under PKPU," the officer said. Implementing the debt restructuring agreement and equity adjustment through the injection of funds from shareholders are important steps. "We are also making equity adjustments through fund injections from shareholders," he explained. The switch to O&M aims to stabilize operations, improve liquidity, and provide a more predictable revenue stream. "The shift to O&M will provide a more stable and predictable revenue stream," he emphasized. Investments in technology and human resources will support less complex and more predictable O&M operations, thus ensuring sustainability and profitability. "O&M operations are critical to the sustainable cash flow needed for operations," he adds. Through these detailed insights, it is clear that Rekind's strategic shift from EPC to O&M involves comprehensive planning and execution across multiple divisions to ensure a successful transformation.

B. Soft System Methodology (SSM) Result

1) Identifying the problematic situation

Analyses of the interviews revealed key insights into Rekind's operational and strategic challenges during the transformation from EPC to O&M. The complexities and risks inherent in the EPC business, particularly related to cost overruns, scheduling delays and quality issues, significantly impacted Rekind's financial performance. These complexities require effective risk management practices aligned with ISO 31,000 standards. The shift to O&M was seen as a strategic



move to diversify and stabilize the company amidst high uncertainty in EPC projects, which offered risk mitigation. However, this transformation has several challenges, including legal, financial, and approval risks, as well as the need for alignment, funding, and customization of capabilities. Despite these challenges, the transition offers significant opportunities, particularly in reducing initial funding requirements and leveraging existing performance capabilities within the group, thus providing a potentially lower cost business model compared to EPC projects.

Table 1. Problematic Situations and Strategic Considerations

| Key Aspect | Details | Focus Areas |
|--|---|--|
| Complexity and Risk in EPC Operations | Managing large-scale projects with high complexity in balancing cost, schedule, and quality. Risks include financial losses, delays, and sanctions. | Cost, Schedule, Quality |
| Risk Management Processes | Implementing risk management strategies based on ISO 31.000 standards, involving qualitative and quantitative assessments and financial prioritization. | Risk Identification and Mitigation |
| Strategic Transformation to O&M | Transitioning to the O&M model to reduce high EPC risks, introducing new risks such as legal compliance, financial constraints, and approval processes. | Legal Compliance, Funding, Approvals |
| Legal and Regulatory Challenges | Adjusting business fields and licensing to meet legal standards, involving significant due diligence and influenced by shareholder and client expectations. | Legal Due Diligence, Licensing, Stakeholder Management |

2) *Structured Problematic Situation & Creating Rich Pictures*

Analysis of the interviews revealed key insights into Rekind's challenges during the transformation from EPC to O&M. The complexity and risks of the EPC business, especially cost overruns, scheduling delays, and quality issues, significantly impacted Rekind's financial performance. The Senior Risk Officer highlighted, "Indeed, the EPC business is quite complex because we will see the objectives of the EPC project, especially in terms of cost, schedule, time schedule, and also quality, where all three certainly have their own risks." Effective risk management practices aligned with ISO 31,000 standards are essential to mitigate these risks. "The method of analysis or implementation of risk management that we do is in accordance with the ISO 31,000 standard where we conduct a framework and also a risk analysis process to detail the analysis qualitatively and quantitatively where qualitatively we do leveling, then we prioritise which risks are the top risks to low category risks."

The shift to O&M aims to diversify and stabilise the company amidst the high uncertainty of EPC projects. "Indeed, it can be said what Mr Romi said, we Rekin is planning the O&M business, it can be said as a risk mitigation of Rekin's own company risk," said the officer. However, this transformation has several challenges, including legal, financial, and approval risks. "The first thing we definitely see is legal risk, we have to look at Rekin's articles of association or bylaws as a company whether it is still feasible to run an O&M business," the officer explained. Despite these challenges, the transition offers opportunities, particularly in reducing initial funding requirements and leveraging existing performance capabilities, providing a potentially lower-risk business model compared to EPC projects. Table 2 summarises the root causes and potential solutions to the identified issues.

Table 2. Root Cause Analysis

| Issue (Observed Symptom) | Potential Causes | Possible Solutions |
|---|--|---|
| Complexity and risks in EPC projects | Variability in cost, schedule, and quality requirements. | Implement robust project management strategies and enhance risk assessment processes. |
| Exceeding project budgets | Inadequate initial cost estimations or unforeseen project obstacles. | Strengthen initial cost estimations and incorporate contingency plans. |
| Project delays leading to penalties | Inefficiencies in scheduling and unexpected delays. | Optimize scheduling processes and improve operational efficiency. |

| Issue (Observed Symptom) | Potential Causes | Possible Solutions |
|--|--|---|
| Non-compliance with quality standards | Lack of adherence to quality control measures. | Enforce strict quality control protocols and regular audits. |
| Frequent risk evaluations and management | High risk environment necessitates constant monitoring. | Regularly update and review the risk register; enhance daily mitigation tracking. |
| Transformation to O&M as risk mitigation | High uncertainties and risks associated with EPC projects. | Develop a clear strategic plan for transitioning to less risky O&M operations. |
| Legal, financial, and approval risks in transformation | Legal hurdles, insufficient funding, and lack of approvals from higher management. | Conduct thorough legal due diligence, secure robust financing solutions, and engage actively with stakeholders for approvals. |
| Operational adjustments in O&M transition | Shift from EPC to O&M requires new operational and business strategies. | Train staff for O&M operations, revise business models, and realign operational strategies. |

Furthermore, Table 4 categorizes the causes of losses, steps after restructuring, and expected impacts to provide a structured overview.

Table 3. Categorization of Causes of Losses, Steps After Restructuring, and Expected Impacts

| Category | Details |
|---------------------------|--|
| Causes of Losses | Cost overruns, project delays, inefficient risk management, regulatory challenges, technological challenges, high competition. |
| Steps After Restructuring | Strategic realignment, operational efficiency, enhanced risk management, technological integration, training and development, strengthening stakeholder relationships. |
| Expected Impacts | Financial stability, improved market position, operational resilience, regulatory compliance, employee satisfaction, client satisfaction. |

A rich picture of Rekin's transition from EPC to O&M involves various key actors (Figure 2). The Senior Risk Officer oversees the risk management strategy. Rekin's Management Team, including roles such as VP Legal and other senior managers, guided the transformation process. The Board of Commissioners and shareholders approved key strategic changes, focusing on profitability and risk exposure. Employees adapted to new roles and responsibilities, which required engagement and training. Clients required quality assurance and on-time delivery, while regulatory bodies ensured compliance. External partners and vendors, including foreign partners and third-party collaborators, are critical to maintaining smooth operations and resource availability during and after the transition.

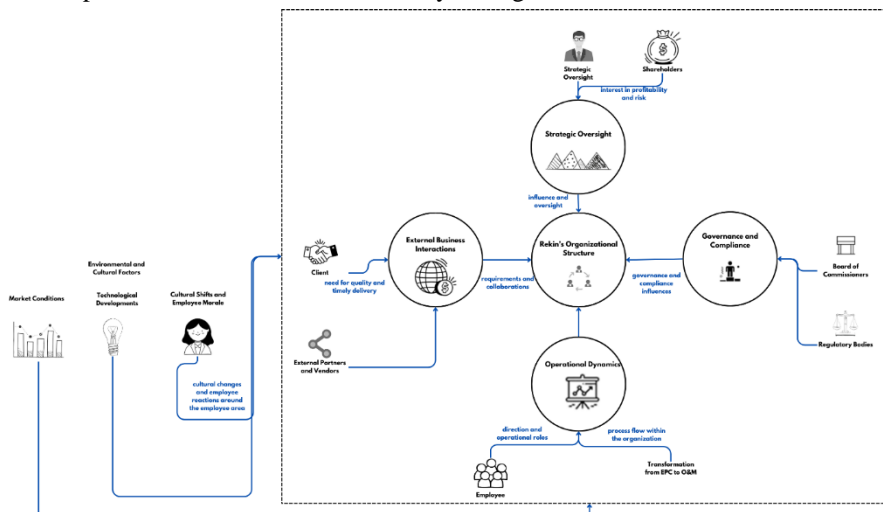


Figure 2. Rich Picture (Source: Author, 2024)



The rich imagery offers a detailed visual representation of Rekind's transformation from EPC to O&M, which involved various parties such as the Senior Risk Officer overseeing risk management, the Management Team making strategic decisions, and the Board of Commissioners and Shareholders approving the change. Employees face changing roles, clients require quality assurance, regulatory bodies ensure compliance, and external partners and vendors are critical to success. This structure included Rekind's organisational framework, legal framework, and project management structure, all of which required adjustments for the transition. Key processes illustrated are risk assessment and management, strategic planning, stakeholder communication, and legal compliance. Potential issues highlighted include financial risks from budget overruns, legal risks from compliance challenges, resistance to change, and the need for technological and operational adjustments. The external environment consists of market conditions, technological developments, regulatory changes, and cultural shifts. Employee concerns over job security and new skill requirements also affect productivity and morale.

3) *Defining Root Definitions of Relevant Systems*

Rekind's Project Financial Control System, Integrated Risk Management System, and Stakeholder Communication Strategy are designed to improve operational efficiency, manage risk, and ensure effective stakeholder communication during the transition from EPC to O&M. These systems aim to prevent financial losses, maintain project integrity, and foster stakeholder confidence.

a) *Project Financial Control System*

The Project Financial Control System at Rekind is a comprehensive framework designed to implement strict financial control and oversight throughout the EPC project cycle. The system's customers include project managers, financial officers, stakeholders, and clients, all of whom rely on accurate financial data for informed decision-making. The key actors involved are financial analysts, project accountants, cost controllers, and management staff who transform raw financial data into actionable insights and controls for budget management. Effective financial management is critical to project profitability and sustainability, and this system is owned by Rekind's senior management. The system operates within environmental constraints such as market conditions, economic fluctuations, regulatory changes, and technological advances.

Table 4. CATWOE Analysis of Project Financial Control System

| Element | Description |
|-------------------------------|---|
| Customers (C) | Project managers, financial officers, stakeholders, clients |
| Actors (A) | Financial analysts, project accountants, cost controllers, management staff |
| Transformation (T) | Transforming raw financial data into actionable insights and controls for budget management |
| Worldview (W) | Effective financial management is crucial for project profitability and sustainability |
| Owner (O) | Rekind's senior management |
| Environmental Constraints (E) | Market conditions, economic fluctuations, regulatory changes, technological advancements |

b) *Integrated Risk Management System*

The Integrated Risk Management System at Rekind is an essential framework that aims to identify and mitigate risks to reduce cost overruns and project failure. The system serves project teams, risk managers, and board members who rely on it to maintain project integrity and achieve successful outcomes. Actors involved include risk management professionals, project managers, and operational teams that proactively address potential risks. Proactive risk management is critical to project success, and the system transformation process focuses on turning risk assessments into actionable mitigation strategies. Owned by Rekind's board of directors, the system operates under various environmental constraints such as industry standards, regulatory requirements, project scope changes, and technology risks.



Table 5. CATWOE Analysis of Integrated Risk Management System

| Element | Description |
|-------------------------------|---|
| Customers (C) | Project teams, risk managers, board members |
| Actors (A) | Risk management professionals, project managers, operational teams |
| Transformation (T) | Identifying and mitigating risks to reduce project overruns and failures |
| Worldview (W) | Proactive risk management is essential to project success |
| Owner (O) | Rekind’s board of directors |
| Environmental Constraints (E) | Industry standards, regulatory requirements, changing project scopes, technological risks |

c) *Stakeholder Communication Strategy*

Rekind's Stakeholder Communication System is designed to increase transparency and facilitate ongoing dialogue, aligning project objectives with stakeholder expectations. The system serves all internal stakeholders, including employees and management, as well as external stakeholders such as clients, partners and regulators. The key actors involved are communications officers, project managers, senior executives, and public relations teams who ensure that communications are clear, consistent, and effective. Open and effective communication fosters trust and facilitates smoother project execution, and the system turns regular updates and feedback into actionable insights. Owned by Rekind's communications department, the system had to navigate environmental constraints such as socio-economic factors, cultural differences in communication practices, and changing stakeholder expectations and media landscapes.

Table 6. CATWOE Analysis of Stakeholder Communication Strategy

| Element | Description |
|-------------------------------|--|
| Customers (C) | All internal stakeholders (employees, management) and external stakeholders (clients, partners, regulators) |
| Actors (A) | Communication officers, project managers, senior executives, PR teams |
| Transformation (T) | Enhancing transparency and continuous dialogue to align project objectives with stakeholder expectations |
| Worldview (W) | Open and effective communication fosters trust and facilitates smoother project execution |
| Owner (O) | Rekind’s communication department |
| Environmental Constraints (E) | Socio-economic factors, cultural differences in communication practices, changes in stakeholder expectations and media |

4) *Building Conceptual Model*

The conceptual model (Figure 3) systematically addresses critical issues in Rekind's transition from EPC to O&M operations through interconnected systems designed to improve efficiency and sustainability. Fundamentally, the Financial Control System, led by the Finance Director, emphasises strict budget management and financial forecasting, producing detailed financial reports that guide strategic decisions. These results feed into the Risk Management System, managed by the Senior Risk Officer, which identifies, evaluates, and mitigates risks such as cost overruns and schedule delays. The system's comprehensive risk assessment supports the Quality Assurance and Compliance layer, overseen by the Quality Manager, to ensure compliance with external standards and internal benchmarks.

The resulting compliance and quality reports refine the operational strategies in the O&M Transition Strategy. This strategic shift, managed by a dedicated transition team, integrates financial, risk and quality insights to develop a robust new business model, resulting in an implementation plan and training programme essential for a smooth transition. The model is cyclical, with feedback mechanisms that loop back to the Financial Control System, facilitating continuous improvement and responsiveness to organisational and market needs. This interlinked approach not only addresses financial losses on large-scale projects, but also explores strategies to improve operational and financial stability post-restructuring, aiming for a more stable and prosperous future for Rekind.

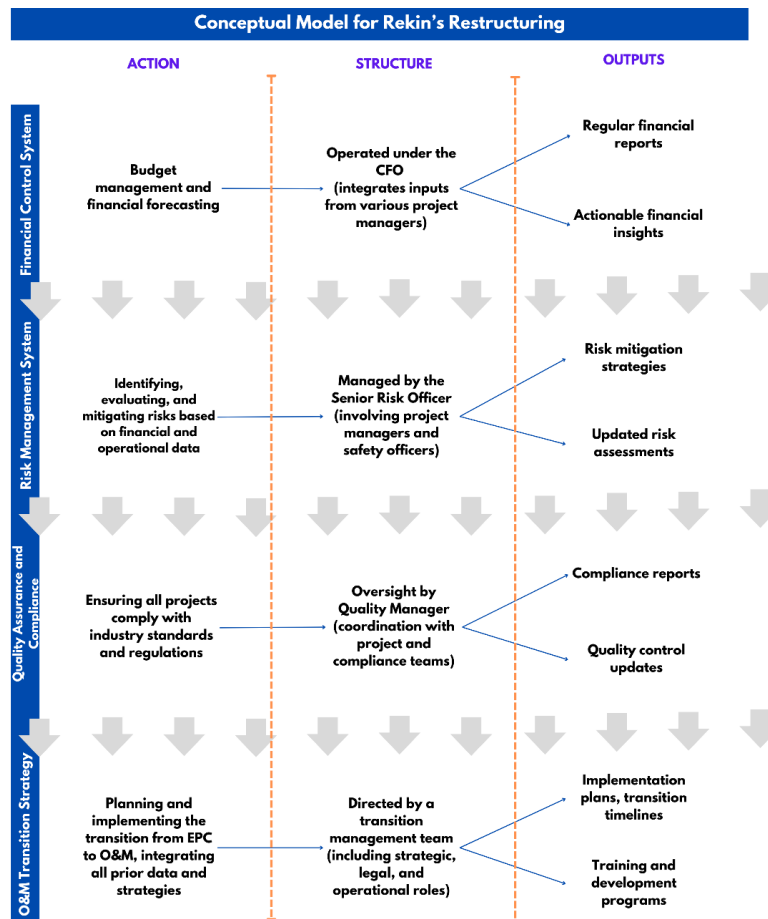


Figure 3. Conceptual Model for Rekin's Restructuring (Source: Author, 2024)

5) *Comparing Models with Real World Situations*

Table 7 provides a structured analysis of Rekind's transformation from EPC to O&M by outlining Real World Perceptions, Systemized Activities, Requirements, Actions for Change, and Relevant Stakeholders. Starting with Real World Perception, it identifies key challenges and opportunities during the transition, such as the complexity and risks of the EPC business, the strategic rationale for switching to O&M, and the legal and operational adjustments required. Systemized Activities details tasks such as risk identification, strategic planning, legal compliance, and market analysis that are essential to understanding and mitigating risks while capitalizing on growth opportunities. The Requirements column sets out the elements needed to support these activities, including comprehensive risk identification, ISO standards alignment, detailed risk assessments, legal due diligence, and HR capability development. Actions for Change outlines practical steps such as refining strategies, implementing robust risk management systems, conducting compliance audits, and developing HR training programmers. Finally, Relevant Stakeholders identify responsible teams, such as the Risk Management Team, Strategic Planning Team, Legal and Finance Team, and HR Team, to ensure that all aspects of the transformation are addressed systematically and relevant stakeholders are engaged for a successful transition to the O&M business model.

6) *Discussing and Debating the Models*

Roles and responsibilities in Rekind's restructuring model are well defined, although further documentation is recommended for clarity and efficiency, as highlighted by VP Corporate Planning. Periodic review is needed to ensure roles remain relevant amidst changes in the law, said VP Legal, GCG & Contract Management. VP Corporate Finance emphasised the need for role adjustments in response to financial fluctuations, while Marketing Business Development



Manager stressed the importance of role flexibility to adapt to market dynamics. Regular updating of inputs and outputs based on recent developments is essential, as emphasised by the VP Corporate Planning. Stricter audit procedures to maintain transparency and accountability were suggested by the VP Legal, GCG & Contract Management. A dynamic financial risk assessment is essential to maintain stability, said the VP Corporate Finance, and the model should adjust inputs based on feedback from the market, added the Marketing Business Development Manager. Each component of the model supports Rekind's restructuring objectives, contributing to operational efficiency, cost reduction, and market competitiveness, as stated by the VP of Corporate Planning. The legal compliance component prevents risks, says VP Legal, GCG & Contract Management. The finance component addresses debt restructuring and optimises cash management, which is critical for stability, says VP Corporate Finance. The market strategy component aims to increase customer engagement, commented the Marketing Business Development Manager. Some misalignment was found, particularly regarding legal compliance and financial sustainability, with recommendations for a more flexible legal oversight system and a balanced financial approach that includes revenue generation and growth opportunities, as presented by the VP Legal, GCG & Contract Management, and VP Corporate Finance. Marketing actions were found to be aligned with the desired results, commented the Marketing Business Development Manager.

7) *Taking Actionable Steps*

The transition from Engineering, Procurement, and Construction (EPC) to Operations and Maintenance (O&M) in Rekind's business model requires a comprehensive strategy that addresses various real-world perceptions and systemised activities. The identification of EPC business complexities and risks involves the Risk Management Team in implementing comprehensive risk identification and refining strategies. Robust risk management practices aligned with ISO 31,000 standards ensure effective risk management. The Strategic Planning Team drives the transformation rationale through strategic planning for diversification and developing a clear business plan. Confronting the risks and challenges of transformation requires a robust risk assessment process and detailed evaluation by the Legal and Finance Team. The Business Development Team explores O&M opportunities by identifying funding needs and capabilities, aligning them to maximise business growth. Legal compliance and business and licence adjustments, conducted by the Legal Team, ensure regulatory compliance, while compliance audits and regular legal reviews by the Compliance and Legal Team mitigate financial risks. Adapting to new contract types and revenue models requires detailed contract studies by the Legal and Finance Teams, while HSE policy upgrades involve regular updates by the HSE and Legal Teams to ensure safety and compliance.

Comparing legal risks between EPC and O&M business models requires a thorough legal risk assessment by the Legal Team. The Business Development Team conducts market analysis and competency assessments to ensure business viability, while the HR Team evaluates HR readiness and develops training programmes essential for smooth transformation. The Risk Management Team applies a comprehensive risk management framework to address internal and external risks. The Client Relationship Team capitalises on client relationships and fosters long-term collaboration to ensure client satisfaction. Transformation Management Team facilitates systematic planning and team building for effective implementation of transformation stages. Financial health monitoring and restructuring of financial obligations by the Finance Team address financial instability and debt management. The Executive Management Team ensures smooth operations through effective communication and coordination, while the Finance and Reporting Team stabilises revenue through O&M activities. Finally, the HR and Technology Team invests in technology and training programmes to improve resource management, ensuring a successful transition to the O&M business model. This comprehensive framework ensures that all steps are aligned with Rekind's strategic goals, improving operational efficiency and ensuring long-term sustainability.

C. **Business Solution**

The business solution for Rekind's restructuring involved a multifaceted approach that addressed four critical systems: Financial Control System, Risk Management System, Quality Assurance and Compliance, and O&M Transition Strategy. Initially, the CFO oversaw budget management and financial forecasting, integrating inputs from project managers to produce regular financial reports and actionable insights. This centralized oversight ensured financial health and resource allocation. Concurrently, the Risk Management System, managed by the Senior Risk Officer, focused on risk identification, evaluation, and mitigation, providing



strategies to maintain operational stability. The Quality Assurance and Compliance system, overseen by the Quality Manager, ensured adherence to industry standards and regulations, producing compliance reports and quality control updates to maintain high standards. Finally, the O&M Transition Strategy, directed by a transition management team, involved detailed planning and implementation, creating a comprehensive training and development program to ensure a smooth transition from EPC to O&M. This coordinated approach ensured Rekind's successful transformation, minimizing disruptions and promoting continuous improvement.

CONCLUSION

Rekind's strategic transition from Engineering, Procurement and Construction (EPC) to Operations and Maintenance (O&M) was a calculated effort to mitigate the high risk and complexity inherent in EPC projects. This qualitative analysis highlights the need to leverage existing client relationships and technical expertise to stabilise and diversify Rekind's operations. By aligning its risk management practices with ISO 31,000 standards, Rekind aims to address financial, operational and legal risks more effectively. This structured approach to transformation, which includes comprehensive strategic planning, robust risk management practices and continuous stakeholder engagement, is expected to improve the company's strategic focus, organisational efficiency and market competitiveness. The overall goal is to achieve a more sustainable business model that can withstand market fluctuations and operational challenges. The interviews conducted revealed key insights into the operational and strategic challenges Rekind faced during this transformation. The shift to O&M was seen as a strategic move to diversify and stabilise the company amidst the high uncertainty of EPC projects. However, this transformation came with considerable challenges, including legal, financial, and approval risks, as well as the need for alignment, funding, and customisation of capabilities. By focusing on effective risk management, thorough legal and financial evaluation, and strategic planning, Rekind was able to overcome these challenges. Engaging relevant stakeholders and clearly defining their roles and responsibilities was an important step in improving the efficiency and effectiveness of the restructuring process. Expected outcomes include increased strategic focus, improved organisational efficiency, and a stronger presence in the market.

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