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ADMINISTRATION

**SUSTAINABLE DEVELOPMENT THROUGH
INTEGRATED THINKING AND REPORTING**

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1. Context and Importance of Research

Sustainable development has become one of the defining challenges of contemporary organizations. Growing environmental concerns, increasing stakeholder expectations, stricter regulatory requirements, and heightened demand for corporate transparency have created pressure on organizations to rethink how they create and sustain value over time. Companies are no longer evaluated solely through their financial performance but also through their capacity to address environmental, social, and governance (ESG) issues while maintaining long-term competitiveness. Within this evolving context, traditional corporate reporting has been increasingly criticized for its inability to provide a complete understanding of organizational performance and value creation processes. As a response, Integrated Reporting (IR) emerged as an innovative reporting approach that seeks to connect financial and non-financial information, offering a more comprehensive representation of organizational activities and outcomes. However, growing academic and professional discussions have highlighted that meaningful IR cannot exist without Integrated Thinking (IT), understood as the active consideration of the relationships among organizational units, resources, stakeholders, strategy, governance, risks, and opportunities.

Although the concepts of Integrated Thinking and Reporting (ITR) have gained significant attention during the last decade, important knowledge gaps remain. Existing research has predominantly focused on reporting practices and disclosure quality, while relatively limited attention has been devoted to the organizational mechanisms, managerial perceptions, and change processes that support the adoption and implementation of ITR. Furthermore, most empirical evidence originates from developed economies and large corporations, leaving considerable uncertainty regarding how these practices operate within resource-intensive industries located in emerging economies.

The significance of this doctoral research lies in its attempt to bridge these gaps by investigating ITR as a mechanism that supports sustainable development and organizational transformation. The study focuses on Silcotub SA, part of the Tenaris Group, a company operating in a highly resource-intensive industrial sector where sustainability challenges, stakeholder expectations, and operational complexities are particularly pronounced.

By combining literature analysis, qualitative investigation, and interventionist research, this thesis provides a comprehensive understanding of ITR from multiple perspectives. The research contributes both to academic knowledge and managerial practice by explaining how organizations

can move beyond compliance-oriented sustainability initiatives toward the embedding of sustainability principles within organizational decision-making, governance systems, and operational processes.

2. Research Purpose, Objectives and Questions

The overall purpose of this doctoral thesis is to investigate how ITR contributes to sustainable development and long-term value creation by transforming organizational decision-making processes, managerial behaviors, governance structures, and reporting practices.

The research seeks to understand ITR not merely as reporting mechanisms but as organizational capabilities capable of facilitating sustainable transformation. More specifically, the thesis aims to explain how the concept has evolved in academic literature, how organizational actors perceive and interpret it, and how it can be practically implemented within a complex industrial environment.

To achieve this purpose, the study pursues three interconnected objectives.

The first objective is to analyze the evolution of ITR literature and to identify the principal theoretical perspectives, implementation challenges, and future research directions associated with sustainable development.

The second objective is to investigate the organizational, institutional, and behavioural factors influencing the adoption of ITR, with particular emphasis on the cognitive interpretations of managers and employees involved in sustainability-related decision-making processes.

The third objective is to develop and empirically validate an interventionist framework capable of supporting ITR implementation and sustainable organizational transformation within a resource-intensive industrial setting.

These objectives are addressed through a set of interconnected research questions:

Chapter I

RQ1. How does the literature on ITR evolve?

RQ2. What are the main issues concerning ITR adoption, and how do these affect the sustainable development of the organization?

RQ3. What are the future research perspectives for ITR, and what will be the role of ITR in sustainable development?

Chapter II

RQ: *How do institutional and organizational factors contribute to, or limit the adoption of ITR?*

Chapter III

RQ: *How does a metallurgical company develop and implement ITR practices that contribute to sustainable organizational development?*

3. Theoretical Framework

The research is grounded in a multidisciplinary theoretical framework that combines perspectives from accounting, organizational studies, sustainability management, and organizational change literature.

Institutional Theory provides an important foundation for understanding how organizations respond to growing external pressures relating to sustainability and reporting practices. Regulatory developments, professional expectations, stakeholder demands, and industry norms create incentives and constraints that influence the adoption of ITR.

Stakeholder Theory supports the analysis of organizational accountability and value creation by emphasizing the importance of addressing the information needs and expectations of diverse stakeholder groups. The theory highlights the role of Integrated Thinking in balancing economic, environmental, and social considerations within decision-making processes.

Sensemaking Theory contributes to understanding how managers and employees interpret sustainability-related challenges and construct meaning around ITR initiatives. Because implementation requires significant behavioral and cultural change, managerial interpretations play a decisive role in determining whether integration efforts succeed or fail.

Dynamic Capabilities Theory offers insights into how organizations develop the capacity to adapt to changing environments. Integrated Thinking is conceptualized as a capability that enables organizations to integrate resources, align strategic objectives, and respond effectively to sustainability challenges.

The interventionist component of the research relies heavily on **Laughlin's model of organizational change**. This framework provides an analytical lens through which organizational transformations can be examined by considering interactions among interpretive schemes, design archetypes, and organizational subsystems.

Together, these theoretical perspectives enable a comprehensive understanding of ITR as a multidimensional phenomenon encompassing institutional influences, managerial cognition, organizational learning, stakeholder engagement, and organizational transformation.

4. Methodology

This doctoral research adopts a qualitative multi-method research design aimed at developing a comprehensive understanding of Integrated Thinking and Reporting (ITR) and its contribution to sustainable organizational development. Given the complexity of the phenomenon under investigation, the study combines complementary research approaches that allow the topic to be examined from theoretical, behavioral, and organizational perspectives. The research design was developed progressively, with each stage informing and extending the subsequent one, thereby ensuring methodological coherence and theoretical depth.

The first stage of the research consisted of a *Structured Literature Review (SLR)* conducted in accordance with the framework proposed by Massaro et al. (2016). The purpose of this stage was to establish the theoretical foundations of the study, synthesize existing academic knowledge, identify dominant research streams, and reveal existing research gaps related to Integrated Thinking, Integrated Reporting, and Sustainable Development. Academic publications were systematically collected from major scientific databases and analyzed to investigate the evolution of the field, the principal theoretical approaches employed, the methodological characteristics of previous studies, and the challenges and opportunities associated with ITR implementation. This phase provided the conceptual basis for the empirical investigation and informed the development of the subsequent research stages.

Building on the insights obtained through the literature review, the second stage employed an *interpretive qualitative case study* approach to investigate how organizational actors perceive and make sense of ITR within a real organizational setting. The empirical study was conducted within Silcotub SA, a Romanian subsidiary of the Tenaris Group, selected due to its relevance as a resource-intensive industrial organization facing increasing sustainability-related challenges and reporting requirements.

Data collection relied primarily on semi-structured interviews, complemented by documentary analysis. Twenty interviews were conducted with managers and specialists representing different organizational functions and hierarchical levels, allowing for the exploration of multiple perspectives regarding sustainability, value creation, organizational integration, and reporting practices. Additional evidence was obtained from sustainability reports, internal procedures, strategic documentation, organizational communications, and other relevant corporate documents.

The analysis followed the principles of Grounded Theory, enabling theory development to emerge inductively from the empirical data. The analytical process incorporated open coding, axial coding, and selective coding procedures, supported by MAXQDA software. This approach facilitated the identification of patterns, relationships, and underlying mechanisms influencing the adoption and implementation of ITR. The outcome of this stage was the development of a *Cognitive Framing Model* explaining how managerial interpretations shape organizational responses to ITR initiatives.

The analysis identified several dominant cognitive frames through which managers interpret ITR: Strategic Value Frame, Sustainability Frame, Stakeholder Frame, Compliance Frame, Fragmentation Frame, Change-Enabling Frame, Barrier Frame and Uncertainty Frame. To further understand the interaction among these frames, the study developed a *Cognitive Frames Matrix*, which illustrates the dynamic relationships between enabling and constraining interpretations of Integrated Thinking and Reporting.

The Cognitive Framing Model and the Cognitive Frames Matrix constitute important theoretical contributions of the thesis, providing a behavioral explanation of ITR adoption and highlighting the central role of managerial sensemaking in sustainability integration processes.

The third stage adopted an *Interventionist Research approach*, extending the analysis from understanding the phenomenon to actively examining its implementation and organizational implications. The intervention was conducted over an extended period and followed the Diagnosis–Action–Reflection cycle characteristic of interventionist research. This stage enabled the observation of organizational initiatives related to sustainability integration, governance mechanisms, management control systems, performance measurement, and reporting practices.

To analyze organizational change, the intervention was interpreted through Laughlin's (1991) organizational change framework, which distinguishes between interpretive schemes, design archetypes, and organizational subsystems.

The framework provided a structured lens for examining how Integrated Thinking influences both managerial beliefs and organizational arrangements. It enabled the identification of relationships between the cognitive frames uncovered in the second stage and the organizational transformations observed during implementation.

Rather than focusing exclusively on reporting outcomes, this stage examined how sustainability principles became progressively embedded in governance structures, management systems, decision-making processes, and operational practices.

5. Main Findings

The findings of this doctoral research are derived from three complementary research stages that collectively contribute to understanding how ITR supports sustainable development and organizational transformation. While each chapter addresses a distinct research objective, together they provide a progressive explanation of the evolution, adoption, and implementation of ITR within organizational settings.

Chapter 1: Integrated Thinking and Reporting for Sustainable Development -Academic and Practitioners Debates

The first chapter provides a comprehensive synthesis of the existing literature on ITR and its relationship with sustainable development. The review reveals a significant evolution of the field over the last decade, moving from a primary focus on reporting practices towards a broader understanding of integration as a strategic and organizational process.

The findings indicate that ITR has increasingly been associated with value creation, sustainability integration, stakeholder engagement, governance effectiveness, and organizational transformation. The literature confirms that Integrated Thinking is recognized as the underlying mechanism that enables organizations to move beyond fragmented decision-making and develop a more holistic understanding of value creation over the short, medium, and long term.

The review also identifies several persistent challenges affecting implementation. These include difficulties in integrating financial and non-financial information, limited organizational capabilities, insufficient leadership commitment, the dominance of silo-based structures, and the lack of practical implementation frameworks. Furthermore, although Integrated Reporting has attracted considerable scholarly attention, Integrated Thinking remains comparatively underexplored, particularly regarding its behavioral, cognitive, and organizational dimensions.

A key finding of the first chapter is that the existing literature offers limited empirical evidence regarding how Integrated Thinking emerges and evolves within organizations. This finding justifies the empirical investigation undertaken in the subsequent chapters and highlights the need

for research focusing on organizational actors, implementation processes, and transformation dynamics.

Chapter 2: The Role of Internal Actors in Driving Integrated Thinking and Reporting: A Case Study of Organizational Change Toward Sustainability

The second chapter investigates how managers and organizational actors perceive and interpret ITR. The findings demonstrate that the adoption of ITR is strongly influenced by managerial cognition, organizational culture, and the meanings that individuals attribute to sustainability-related initiatives.

Using a Grounded Theory approach, the study identifies multiple cognitive frames that shape managerial interpretations of ITR. These include strategic value, sustainability orientation, stakeholder engagement, compliance requirements, organizational fragmentation, implementation barriers, uncertainty, and change enablement.

The analysis reveals that managers do not share a single understanding of ITR. Instead, perceptions vary depending on organizational roles, responsibilities, and prior experiences. While some participants perceive ITR primarily as a strategic tool capable of supporting long-term value creation and organizational resilience, others approach it mainly as a regulatory requirement associated with increasing sustainability disclosure obligations.

One of the most important findings of this chapter is that successful implementation depends upon the alignment of these cognitive frames across organizational levels. Where a shared understanding exists, ITR is more likely to influence strategic decision-making and operational practices. Conversely, misalignment of managerial interpretations creates resistance, uncertainty, and implementation barriers.

The chapter therefore demonstrates that ITR is not merely a technical reporting concept but a cognitive and social process through which organizational actors construct meaning around sustainability and value creation.

Chapter 3: Interventionist Research: Developing Framework for Integrated Thinking and Reporting that Leads to Sustainable development

The third chapter provides empirical evidence regarding the practical implementation of ITR through a longitudinal intervention conducted within Silcotub SA.

The findings demonstrate that the implementation of ITR is a gradual process requiring continuous organizational learning and adaptation. Rather than emerging through a single organizational initiative, ITR develops progressively through repeated cycles of diagnosis, action, reflection, and organizational adjustment.

A central contribution of this chapter is the application of Laughlin's (1991) organizational change framework to explain how sustainability-related transformation occurs within organizations.

The intervention reveals significant changes across the three dimensions proposed by Laughlin.

At the level of interpretive schemes, managers progressively move from compliance-oriented perspectives towards a broader strategic understanding of sustainability, value creation, and stakeholder responsibility. The research demonstrates that changes in managerial beliefs and assumptions represent the foundation of sustainable organizational transformation.

At the level of design archetypes, the organization gradually modifies governance mechanisms, performance management systems, reporting structures, and decision-making processes. Sustainability considerations become increasingly incorporated into strategic planning and managerial control systems.

At the level of organizational subsystems, observable changes occur in daily practices, reporting activities, communication processes, performance monitoring, and cross-functional collaboration. These operational changes represent the practical manifestation of deeper transformations occurring within organizational structures and managerial thinking.

The findings indicate that ITR acts as a catalyst for organizational change by creating stronger connections between organizational strategy, governance, sustainability objectives, and operational activities. The study further demonstrates that sustainable development is achieved through the alignment of these organizational dimensions rather than through reporting practices alone.

6. Thesis Conclusions

This doctoral research sets out to investigate how ITR can support sustainable development by influencing organizational decision-making, fostering organizational integration, and enabling long-term value creation. Through a combination of systematic literature analysis, qualitative investigation of managerial perceptions, and longitudinal interventionist research conducted within Silcotub SA, the thesis develops a comprehensive understanding of ITR as both a conceptual framework and an organizational transformation mechanism.

The research demonstrates that ITR should not be understood merely as a reporting practice or a response to increasing sustainability disclosure requirements. Rather, it represents a broader organizational capability that enables companies to integrate financial, environmental, social, and governance considerations into strategic and operational decision-making. In this regard, the thesis confirms that Integrated Thinking constitutes the foundation upon which meaningful Integrated Reporting is built, transforming reporting from a compliance-oriented exercise into a manifestation of integrated organizational processes.

The systematic review of the literature reveals the progressive evolution of ITR from a reporting-focused concept toward a strategic management approach centered on value creation, stakeholder engagement, organizational learning and sustainability integration. While the existing body of knowledge acknowledges the importance of integration, limited evidence has been available regarding the organizational processes through which Integrated Thinking develops and becomes embedded within managerial practice. This research contributes to addressing this gap by examining both the behavioral and structural dimensions of implementation.

The empirical findings demonstrate that the adoption of Integrated Thinking is strongly influenced by managerial interpretations and organizational sensemaking processes. The study shows that sustainability integration is not achieved solely through formal systems, reporting frameworks, or external pressures, but also through the development of shared cognitive understandings regarding organizational purpose, long-term value creation, and stakeholder responsibilities. Consequently, Integrated Thinking emerges as a collective organizational process shaped by leadership, culture, organizational learning and cross-functional collaboration.

A central contribution of the thesis is the explanation of ITR implementation through the lens of Laughlin's (1991) model of organizational change. The interventionist study demonstrates that the transition towards more sustainable organizational practices occurs through interconnected changes at three organizational levels.

At the level of interpretive schemes, the research identifies a gradual shift in managerial beliefs and assumptions, moving from compliance-driven perspectives toward a broader understanding of sustainability as a strategic driver of value creation. Managers increasingly recognize the interconnectedness of financial performance, stakeholder relationships, environmental impacts and long-term organizational resilience.

At the level of design archetypes, the implementation of Integrated Thinking leads to changes in governance mechanisms, performance measurement systems, management control practices and decision-making structures. Sustainability considerations become progressively incorporated into strategic planning, operational monitoring and organizational performance evaluation.

At the level of organizational subsystems, the research documents tangible changes in everyday practices, reporting processes, communication mechanisms and cross-functional interactions. These operational changes represent the practical manifestation of deeper transformations occurring within managerial thinking and organizational structures.

By applying Laughlin's framework, the thesis demonstrates that ITR acts as a catalyst for organizational transformation, facilitating alignment between organizational values, management systems and operational activities. The findings suggest that sustainable development is achieved not through isolated reporting initiatives but through gradual, cumulative and mutually reinforcing changes across these three organizational dimensions.

The interventionist research further shows that organizational transformation is an iterative and continuous process. Rather than occurring through a single intervention, sustainability integration develops through recurring cycles of diagnosis, action and reflection that progressively reshape organizational practices and managerial understandings. This process highlights the importance of organizational learning as a prerequisite for developing ITR capabilities.

From a theoretical perspective, the thesis contributes to the emerging literature on ITR by proposing an integrated explanatory framework combining Institutional Theory, Stakeholder Theory, Sensemaking Theory, Dynamic Capabilities Theory and Laughlin's model of organizational change. The research advances understanding of how external pressures, stakeholder expectations, managerial cognition and organizational structures interact to support sustainable development.

From a methodological perspective, the originality of the thesis resides in the combination of structured literature review, grounded theory analysis and longitudinal interventionist research. This methodological triangulation provides a richer understanding of ITR than would be possible through any single methodological approach and generates rare longitudinal evidence regarding the implementation process.

From a practical perspective, the thesis provides managers with a roadmap for embedding sustainability within organizational decision-making. The findings emphasize that successful

implementation requires leadership commitment, cross-functional collaboration, integrated performance measurement systems, stakeholder engagement and continuous organizational learning. Most importantly, the research demonstrates that sustainable development becomes operational only when integrated into everyday managerial decisions and organizational routines. In conclusion, this thesis argues that ITR represents far more than a reporting innovation. It constitutes a transformative organizational capability that enables companies to align strategy, governance, operations and sustainability objectives within a coherent value-creation system. Through the changes identified in interpretive schemes, design archetypes and organizational subsystems, ITR facilitates the transition from fragmented sustainability initiatives to genuinely integrated and sustainable organizations. As such, it provides a viable pathway through which organizations can create economic, social and environmental value while strengthening their long-term resilience and legitimacy in an increasingly complex and sustainability-oriented business environment.