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From CSRD Reporting Requirements to Procurement Decisions: The Role of Scope 3 Supplier Sustainability Data in European Industrial Firms

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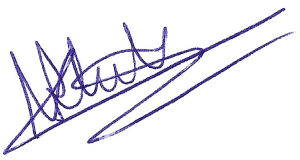
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List of Abbreviations

The following abbreviations, codes and technical notations are used in the thesis.

Abbreviation	Meaning
CBAM	Carbon Border Adjustment Mechanism
CO_2	Carbon dioxide
COVID-19	Coronavirus disease 2019
CSRD	Corporate Sustainability Reporting Directive
DEFRA	Department for Environment, Food & Rural Affairs (United Kingdom)
EC	European Community (designation used in EU legal references)
EPD / EPDs	Environmental Product Declaration(s)
ESG	Environmental, Social and Governance
ESRS	European Sustainability Reporting Standards
ETS	Emissions Trading System
EU	European Union
EUR	Euro (international currency code)
GHG	Greenhouse gas
GLEC	Global Logistics Emissions Council
KPI / KPIs	Key Performance Indicator(s)
LCA	Life Cycle Assessment
P1–P4	Research Propositions 1 to 4
PCF / PCFs	Product Carbon Footprint(s)
R01–R15	Anonymised respondent/interview-unit codes
RFQ / RFQs	Request(s) for Quotation
SBTi	Science Based Targets initiative
UK	United Kingdom
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute

1. Introduction

1.1 Background and Research Context

Industrial firms increasingly depend on their supply chains to achieve environmental objectives. A substantial share of corporate greenhouse-gas emissions occurs outside the focal firm's direct boundaries, particularly through purchased goods and services, raw materials, transport and outsourced activities (Hertwich & Wood, 2018; WRI & WBCSD, 2011). Procurement therefore occupies a central position because it manages supplier relationships and influences which products, materials and services enter the organisation.

For the purposes of this thesis, supplier sustainability data refers to quantitative and qualitative information describing a supplier's environmental performance and related governance evidence. It includes Product Carbon Footprints (PCFs), Environmental Product Declarations (EPDs), ESG ratings, questionnaire responses, emission factors, certifications, audit evidence and contractual reporting information. Because the empirical focus is Scope 3, the analysis concentrates mainly on carbon-related information while considering broader sustainability data where they shape procurement.

European sustainability reporting has simultaneously become more demanding. The Corporate Sustainability Reporting Directive and the European Sustainability Reporting Standards require more structured, traceable and auditable information on value-chain impacts (European Parliament & Council of the European Union, 2022; European Commission, 2023). Scope 3 emissions are especially challenging because firms depend on information generated by suppliers and other external actors. When primary data are unavailable, organisations often rely on generic factors, spend-based calculations, industry averages and estimates (Schmidt et al., 2022; Canal Vieira et al., 2024).

These developments create an operational problem. More supplier information does not necessarily mean more decision-relevant information. Data may be incomplete, unverifiable, non-comparable, insufficiently granular or available too late, while Procurement must

continue balancing sustainability with price, quality, technical performance, delivery and continuity of supply (Wu & Pagell, 2011; Hald et al., 2021).

The selection of this topic was shaped by my internship within the Procurement Excellence team of a large industrial company, where cross-functional assignments with the sustainability team exposed me to the practical challenges of integrating supplier sustainability information into procurement. It also reflects the complementary perspectives developed through the Philippe de Woot and Supply Chain Management options, which encouraged me to explore how reporting requirements and environmental objectives translate into supplier-related decisions.

1.2 Research Question

Existing research explains why sustainable procurement matters, why Scope 3 emissions are difficult to measure and how environmental criteria could enter supplier-selection models (Giunipero et al., 2012; Govindan et al., 2015; Canal Vieira et al., 2024). However, these streams are often treated separately. Less attention has been paid to how firms respond when supplier sustainability data are imperfect and to the conditions under which such information moves beyond reporting and affects supplier-related decisions.

This gap is particularly relevant in the context of the CSRD. Regulation can formalise supplier-data requests and involve Procurement more directly in collection, yet the pathway from disclosure pressure to supplier selection remains uncertain. Firms may use questionnaires, ESG platforms, audits, contractual clauses, proxies or supplier-development initiatives, but these responses do not all provide the same level of decision support.

The thesis therefore addresses the following research question:

How do CSRD-related Scope 3 data requirements affect the way European industrial firms collect, assess and use supplier sustainability data in procurement decision processes?

The study uses an exploratory qualitative design based on 15 interview units involving 16 respondents across 11 organisational contexts. It combines procurement, sustainability, reporting, management and consulting perspectives and examines the mechanisms linking external pressure, supplier-data constraints, firm responses and procurement consequences. The objective is analytical explanation rather than statistical generalisation.

1.3 Limitations

The study has several boundaries. Its purposive and heterogeneous sample may favour respondents and organisations with greater sustainability knowledge or maturity, and several respondents represented the same industrial group. Their contributions are treated as within-organisation triangulation rather than independent company cases. The findings therefore identify mechanisms and contrasts rather than their prevalence among European industrial firms.

The evidence primarily consists of self-reported professional experience rather than direct observation of sourcing events or systematic access to tender files, contracts, scoring models and internal databases. Two contributions were written and offered less opportunity for probing. Coding was conducted by one researcher while the regulatory and organisational context was evolving; the audit trail and comparison of counter-examples improve transparency but do not eliminate interpretive subjectivity.

1.4 Thesis Outline

Chapter 2 reviews the relevant literature. Chapter 3 presents the conceptual framework, methodology and data. Chapter 4 reports the results, and Chapter 5 analyses them and develops the refined framework. Chapter 6 presents the theoretical and managerial contributions, critically assesses the research design, identifies directions for future research and closes with the final perspective.

2. Literature Review

2.1 Sustainable Procurement and Supply Chain Management

Procurement has evolved from an administrative purchasing function into a strategic activity contributing to cost management, risk reduction, innovation, supplier relationships and long-term value creation. This evolution is particularly relevant to sustainability because a substantial share of an industrial firm's impacts lies outside its direct organisational boundaries. Procurement is therefore a central function through which sustainability objectives can be translated into supplier-related practices.

Sustainable supply chain management integrates economic, environmental and social objectives into material, information and capital flows and into cooperation between supply-chain actors. Seuring and Müller (2008) distinguish supplier management for risks and performance from supply-chain management for sustainable products. Supplier sustainability data can support both purposes by identifying exposure and informing the sourcing of lower-impact products and materials.

The literature also emphasises transparency, collaboration and long-term relationships. Johnsen et al. (2019) argue that purchasing should move beyond short-term price reduction, while Pagell and Wu (2009) associate advanced sustainable supply chains with broader stakeholder relationships and joint improvement. Sustainable procurement consequently includes supplier dialogue, contractual expectations and development initiatives rather than merely adding one environmental criterion to a tender.

Operationalisation nevertheless remains difficult. Giunipero et al. (2012) identify barriers including implementation costs, unclear standards, limited management support and measurement difficulties. Saeed and Kersten (2019) distinguish external drivers, such as regulation and customer expectations, from internal drivers, including capabilities, commitment and strategic orientation. External pressure may increase information needs, but its procurement effect depends on internal processes, incentives and decision authority. Procurement teams must also balance sustainability with price, quality, technical

performance, delivery and continuity of supply across prequalification, tendering, selection, contracting, renewal and supplier development.

2.2 Regulatory Pressure: CSRD, ESRS and Scope 3 Requirements

European sustainability regulation has increased pressure on firms to structure and disclose information about their impacts and risks. The Corporate Sustainability Reporting Directive (CSRD; Directive (EU) 2022/2464) strengthened the move from partly voluntary disclosure towards standardised and externally assured reporting, while the European Sustainability Reporting Standards (ESRS) operationalise these requirements through Commission Delegated Regulation (EU) 2023/2772.

Double materiality requires firms to consider both sustainability-related financial risks and their impacts on people and the environment (Baumüller & Sopp, 2022). For industrial firms, relevant impacts frequently arise through purchased materials, supplier production, logistics and outsourced activities, making Procurement, Supply Chain and Sustainability important sources and users of value-chain information.

The regulatory environment remains dynamic. Directive (EU) 2025/794 postponed application dates for certain undertakings, while Directive (EU) 2026/470 subsequently amended the reporting scope and certain value-chain information requirements. These adopted changes indicate that firms and regulators are still converging towards revised reporting practices (European Parliament & Council of the European Union, 2025, 2026). Formal CSRD exposure may therefore differ across organisations and over time, but supplier-data needs also arise from customer requirements, internal climate targets, carbon regulation and procurement strategies.

Scope 3 emissions are particularly demanding because they occur across upstream and downstream activities outside the focal firm's direct control. The GHG Protocol Corporate Value Chain Standard covers purchased goods and services, transportation, product use and end-of-life treatment (WRI & WBCSD, 2011). Companies must therefore obtain information

from external organisations or estimate emissions when primary supplier data are unavailable.

Reporting obligations also increase auditability requirements. Sustainability expectations must be translated into responsibilities, systems and evidence trails (Adams & Abhayawansa, 2022). National regulatory contexts can produce divergent non-financial reporting approaches (Lin, 2022), while the comparability of sustainability information remains conceptually and operationally complex (Korca et al., 2023). Regulation may therefore increase questionnaires, Product Carbon Footprint requests and contractual clauses, but it does not determine whether the information changes supplier selection.

2.3 Scope 3 Emissions and Supplier Data Constraints

Scope 3 emissions often represent a substantial share of corporate greenhouse-gas footprints in industrial value chains (Hertwich & Wood, 2018; Huang et al., 2009). Purchased materials, transport and outsourced production consequently become important climate levers and place Procurement at the centre of upstream emissions management.

Measurement remains difficult. Large firms may work with thousands of suppliers and products, making systematic primary-data collection unrealistic (Schmidt et al., 2022). Companies therefore rely on spend-based calculations, industry averages, life-cycle coefficients and generic emission factors. These methods can support an aggregate inventory but may lack the product-, site- or supplier-level detail required for sourcing decisions.

In this study, primary data refers to supplier-, site-, process- or product-specific information obtained directly from value-chain actors, whereas secondary data refers to estimates derived from external databases, industry averages, spend-based factors or other generic proxies (WRI & WBCSD, 2011; Canal Vieira et al., 2024). Primary information is not necessarily verified, and secondary information is not necessarily unusable; its suitability depends on the methodology and intended purpose.

Research confirms persistent dependence on assumptions and secondary information and limited engagement beyond first-tier suppliers (Canal Vieira et al., 2024). Li et al. (2020) similarly identify insufficiently differentiated Scope 3 accounting as a barrier to ambitious value-chain targets. Information may therefore be adequate for reporting while remaining insufficient for a tender, scorecard or material-substitution decision.

Supplier-data constraints include availability, reliability, comparability, granularity and timing. Availability concerns whether information is measured and communicated; reliability concerns verification and methodological transparency; comparability concerns boundaries, allocation choices and emission factors; granularity concerns the company, site, product or material level; and timing concerns whether information arrives early enough to influence a decision. Reliance on estimates adds uncertainty that may not be visible to procurement users.

Global and multi-tier supply chains intensify these limitations. Even leading firms struggle to extend sustainability management beyond direct suppliers (Villena & Gioia, 2018). Smaller suppliers may lack resources and expertise, while direct suppliers may have limited upstream visibility. The challenge is also relational: coercive requests may generate formal compliance, whereas collaborative approaches can improve capabilities but require time and resources (Meqdadi et al., 2017).

Firms consequently use databases, proxies, questionnaires, ESG platforms, audits, certifications, contractual clauses and supplier development. The central issue is what these responses enable: a mechanism may complete an annual inventory while remaining too uncertain to distinguish suppliers. Data limitations must therefore be assessed in relation to their intended use.

2.4 Procurement Decision-Making Under Data Uncertainty

Traditional procurement decisions combine price, quality, delivery, technical performance, risk and availability. Sustainability adds objectives and can generate persistent tensions between short-term economic performance and longer-term environmental goals. Wu and

Pagell (2011) show that sustainable supply-chain decisions require trade-offs under uncertainty, while Hahn et al. (2015) argue that economic, environmental and social tensions cannot always be eliminated.

Green supplier-selection research proposes multi-criteria models integrating environmental information with conventional purchasing criteria (Govindan et al., 2015; Igarashi et al., 2013; Aktin & Gergin, 2016). However, these models often assume measurable and comparable indicators, whereas procurement teams may operate with missing, estimated or methodologically inconsistent inputs.

Uncertainty does not necessarily prevent action. Firms may use common proxies, worst-case assumptions, additional evidence or supplier transparency as decision inputs. Hald et al. (2021) nevertheless show that organisations struggle to connect sustainable procurement initiatives to measurable outcomes. The value of supplier data therefore depends on both technical quality and its integration into scorecards, tender rules, contracts and follow-up processes.

Different procurement processes require different data. Aggregate estimates may support reporting or category screening, certifications may be sufficient for prequalification, and supplier development can begin with imperfect information. Direct supplier comparison requires more specific and comparable inputs. Supplier sustainability information should therefore be viewed across a continuum of uses.

Internal organisation further shapes its effect. Sustainability and Reporting may define requirements and validation rules, Procurement manages supplier relationships, and business units may retain authority over volumes or product choices. Finance, Legal and Compliance may also intervene. Even robust data may have limited influence when decision rights remain elsewhere or buyers are rewarded mainly for savings and continuity. Conversely, carbon prices, thresholds, certification gates and customer commitments can translate information into binding financial or procedural consequences.

The literature therefore establishes supplier-data constraints and procurement trade-offs but remains less explicit about the mechanisms connecting them, particularly how firms combine technical responses, supplier engagement and internal governance and when these practices change supplier-related decisions.

2.5 Research Gap and Positioning of the Study

Existing research addresses the problem through separate streams. Sustainable procurement literature explains the role of suppliers; reporting research explains the demand for structured value-chain information; Scope 3 research highlights measurement difficulties; and supplier-selection studies show how environmental criteria could enter decision models. Fewer studies connect these perspectives by examining how firms respond when supplier sustainability data are incomplete, unverifiable, non-comparable, insufficiently granular or delayed.

This gap matters because imperfect information can reshape supplier communication, internal responsibilities, contractual expectations and the credibility of comparisons. Responses may influence procurement directly through prequalification, scoring, tendering, selection and development, or indirectly through reporting, risk management and cross-functional coordination.

The present study examines these mechanisms across different roles, sectors and levels of maturity at the intersection of CSRD-related Scope 3 requirements, supplier-data constraints, firm responses and procurement decision processes.

The research question is:

How do CSRD-related Scope 3 data requirements affect the way European industrial firms collect, assess and use supplier sustainability data in procurement decision processes?

The study contributes by examining sustainable procurement under imperfect data, shifting attention from reporting towards supplier-related processes and governance, and identifying the conditions through which sustainability information becomes influential in procurement.

3. Methodology and Data

3.1 Conceptual Framework

The conceptual framework translates relationships identified in the literature review into a provisional analytical sequence for the empirical investigation. It is not a causal model and does not predict outcomes. Instead, it specifies four elements to be examined across the interviews: external demand for supplier sustainability data, data constraints, organisational responses and possible procurement consequences. Internal maturity, cross-functional coordination and trade-offs are treated as contextual conditions that may alter the relationships between these elements.

The framework deliberately separates data constraints from procurement outcomes. Imperfect information does not automatically produce a decision. Firms may first use generic factors, questionnaires, platforms, audits, certifications, contractual clauses or supplier-development activities. These responses determine whether information remains a reporting input or becomes usable in prequalification, scoring, tendering, supplier selection, contract renewal or supplier development.

3.2 Research Propositions

Four exploratory propositions guided data collection and coding. They clarified the expected mechanisms and provided a common analytical structure rather than supporting statistical hypothesis testing.

- **P1.** CSRD-related Scope 3 requirements increase the need for supplier sustainability data in procurement decision processes.
- **P2.** Limitations in availability, reliability, comparability, granularity, timing and reliance on estimates create uncertainty for procurement teams.
- **P3.** Firms respond to supplier-data limitations through workarounds such as proxies, questionnaires, ESG platforms, audits, contractual data clauses, supplier engagement and supplier development.

- **P4.** Firm responses to supplier-data limitations may influence procurement directly through prequalification, scoring, selection, renewal and development, and indirectly through coordination between procurement, sustainability, reporting, finance, legal and compliance functions.

The propositions were retained in their original form. Inductive themes refined their interpretation, and the empirical analysis assessed whether they were supported, supported with qualifications or conditionally supported. The sequence is summarised in Figure 1.

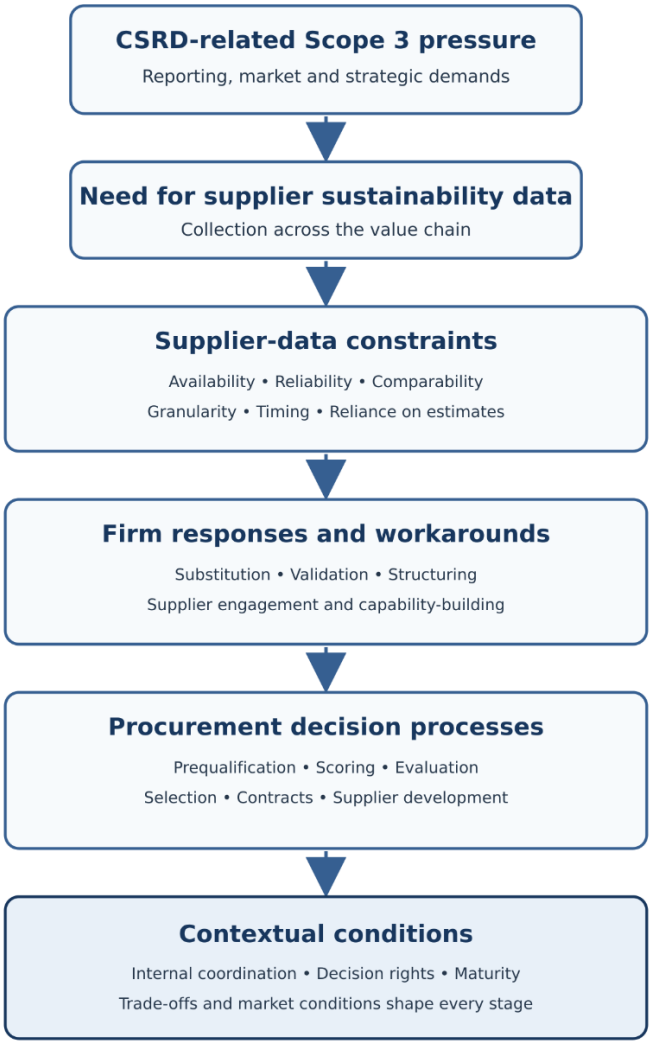


Figure 1. Initial conceptual framework.

Source: Author's own elaboration based on the literature review.

3.3 Analytical Blocks and Coding Dimensions

The interview guide and deductive coding were organised around six analytical blocks: context and maturity; supplier-data constraints; firm responses and workarounds; procurement decision processes; internal coordination and trade-offs; and temporal evolution. Detailed dimensions covered data availability, reliability, comparability, granularity, timing, estimates, procurement stages and cross-functional responsibilities. The complete analytical-block table and initial codebook are provided in Appendix B.

Inductive coding captured recurring themes not fully represented in the initial framework, including alternative drivers such as SBTi, customer requirements and carbon regulation; methodological instability; customer willingness to pay; decision rights and buyer incentives; the distinction between data maturity and decision maturity; and a possible transparency paradox. For example, passages describing advanced Scope 3 reporting systems that did not alter supplier awards were initially coded as a data-decision gap and later consolidated into the distinction between data maturity and decision maturity.

3.4 Research Design and Sampling

The study adopted an exploratory qualitative design based on purposive sampling. This was appropriate because the topic remains recent, organisational practices are heterogeneous and the research question concerns mechanisms and professional interpretations rather than statistical prevalence. The unit of analysis was the interview contribution rather than the company as a whole.

Participants were selected for relevant experience in procurement, supplier management, sustainability, Scope 3 reporting, regulation, senior management or consulting. Contacts were identified through the researcher’s internship and professional network, LinkedIn, personal contacts and referrals, with priority given to professionals working in, or advising, European industrial firms.

The final corpus comprised 15 interview units involving 16 respondents across 11 organisational contexts. Thirteen units consisted of oral interviews, two respondents provided written answers and one oral unit involved two participants from the same organisation. Several respondents came from one industrial group but represented different functions; their contributions supported within-organisation triangulation rather than independent company cases. A detailed anonymised respondent overview is provided in Appendix A.

Recruitment ended once the target number and principal functional profiles had been reached. Later interviews increasingly confirmed central patterns while still providing sector-specific contrasts and counter-examples. Time constraints linked to the thesis schedule also influenced the end of recruitment; complete theoretical saturation is therefore not claimed.

3.5 Data Collection and Sample

All thirteen oral interviews were conducted remotely through Microsoft Teams or Google Meet, in French or English according to respondent preference. Participants were informed of the research purpose, academic use and confidentiality approach, and explicit verbal consent was obtained before recording.

Interviews were recorded on the researcher's personal phone. Audio files were temporarily uploaded to Riverside to generate automated transcripts, which were reviewed and corrected against the recordings before coding. Interviews lasted between approximately 18 and 53 minutes, with an average duration of approximately 33 minutes.

The two written contributions were retained because the respondents possessed directly relevant expertise and addressed the principal themes. They were coded in the same cross-interview matrix as the oral interviews and assessed using the same coding families. Their lower depth and the absence of spontaneous probing were considered during interpretation. Written follow-ups to oral interviews were attached to the corresponding interview unit rather than counted separately.

3.6 Interview Guide and Protocol

A common semi-structured guide preserved comparability while allowing questions to be adapted to each profile. It covered professional background, organisational maturity, changes in supplier-data practices, data constraints, firm responses, procurement decisions, internal coordination, trade-offs and future expectations. Full and short versions in French and English are included in Appendices C to F.

Procurement-oriented respondents received more detailed questions on prequalification, tendering, scoring, supplier selection, contracts and supplier development. Sustainability, reporting and consulting profiles were questioned more deeply about Scope 3 calculation, auditability, supplier engagement, validation and governance. Follow-up questions sought concrete examples, counter-cases and clarification of inconsistencies.

All material was assigned an anonymous respondent code. French quotations were translated into English by the author and checked against the original-language transcripts to preserve substantive meaning. Minor grammatical corrections and the removal of verbal fillers were made only where necessary for readability and without altering the content.

3.7 Data Analysis

The material was analysed through a combined deductive and inductive thematic analysis inspired by Braun and Clarke (2006). Deductive coding maintained continuity with the literature review, propositions and interview guide, while inductive coding captured recurring mechanisms and tensions not adequately represented in the initial codebook.

1. Familiarisation. Corrected transcripts and written answers were read repeatedly, and a summary was prepared for each interview unit.

2. Deductive coding. Passages were coded according to maturity, data constraints, workarounds, procurement processes, internal coordination, trade-offs and temporal evolution.

3. Inductive coding. Additional themes included alternative drivers, methodological instability, customer willingness to pay, decision rights, buyer incentives, the data–decision gap and the transparency paradox.

4. Cross-interview comparison. A matrix with one row per interview unit supported comparison across roles, sectors and organisational contexts.

5. Evidence assessment. The analysis distinguished general opinions, reported organisational practices and concrete decision examples; source locations and timestamps were retained for the strongest evidence.

6. Interpretation. Convergences, divergences and negative cases were compared, and each proposition was assessed qualitatively.

The interpretation combined respondent-level and organisation-level analysis. Repeated observations within one industrial group were not treated as equivalent to evidence from several organisations. An audit trail was maintained through corrected transcripts, summaries, an evolving codebook, a cross-interview matrix and an evidence bank. The analytical blocks and initial codebook are provided in Appendix B, while an illustrative extract from the cross-interview coding matrix is provided in Appendix G.

No second researcher independently coded the material. The objective was analytical credibility and traceability rather than inter-coder reliability, statistical generalisation or formal causal testing.

3.8 Ethical Considerations and Data Management

Participation was voluntary. Respondents were informed of the study's purpose, academic use and confidentiality conditions, and oral participants explicitly consented to recording. Names of respondents, companies, suppliers, customers and projects were removed or generalised; quotations are attributed only to anonymous codes and generalised profiles.

Specific figures or contextual details were retained only when analytically necessary and when they did not create an unreasonable identification risk. Files uploaded to Riverside were deleted after transcription and review. Remaining recordings and working transcripts are stored in password-protected digital storage accessible only to the researcher and will be permanently deleted after formal completion of the thesis.

4. Results

This chapter presents the findings from 15 interview units involving 16 respondents. The analysis is organised thematically to compare recurring patterns, differences and counter-examples across functions, sectors and organisational contexts. The findings reflect respondents' professional perceptions and reported experiences rather than direct observation of procurement decisions. They follow the main components of the initial framework: the evolution of supplier-data practices, data constraints, firm responses, procurement influence, internal coordination and future expectations.

4.1 Drivers and Evolution of Supplier Sustainability Data Practices

The interviews indicate a general movement from broad sustainability declarations and spend-based estimates towards more structured, documented and auditable information. Respondents referred to Product Carbon Footprints, Environmental Product Declarations, supplier-specific emission factors and more detailed operational data. However, the pace and depth of this evolution varied according to organisational maturity, purchasing category and sector.

For reporting-oriented respondents, the most visible effect of the CSRD was stronger auditability. Calculation principles were often already based on the GHG Protocol, but organisations increasingly had to document data sources, assumptions, controls and responsibilities in a form that could be reviewed by auditors (R01, R02, R13).

> *"Our role is mainly to ensure that, when facing the auditors, we have robust processes and files."*
>
> *R01, reporting profile, translated from French*

The CSRD was nevertheless rarely described as the only or initial driver (R03, R06, R14). Several mature firms had begun collecting supplier carbon data through SBTi commitments, internal decarbonisation targets, Life Cycle Assessment expertise or sector initiatives before the regulation became a central operational concern. Customer requirements were also

important, particularly where product-specific footprints or carbon-intensity thresholds were linked to a commercial opportunity (R06, R07, R14). Respondents further distinguished the reporting role of the CSRD from mechanisms such as CBAM, the EU ETS or internal carbon prices, which can transform emissions into financial cost or sourcing risk.

The evolution was uneven across purchasing categories. Carbon performance was easier to express and compare for standardised raw materials such as steel or aluminium, where emissions could be reported per tonne and sector methodologies were more established. Complex components, services and multi-tier supply chains required more assumptions and offered lower upstream visibility. Overall, Proposition 1 is supported with an important qualification: CSRD-related requirements increase the need for structured, traceable and auditable supplier information, but their direct influence on procurement remains dependent on customer demand, internal targets, category characteristics and financial or regulatory consequences.

4.2 Persistent Supplier Sustainability Data Constraints

Despite this progress, supplier sustainability data remained difficult to collect and use consistently. The most basic limitation was the absence of primary supplier information. Some suppliers did not calculate emissions, while others reported only their direct operations and omitted important upstream inputs. Smaller suppliers were frequently described as having fewer resources, systems and specialist capabilities than large industrial groups (R05, R12, R13, R14). The consulting respondents similarly observed that some suppliers completed customer questionnaires without a formal calculation methodology (R13, R15).

The interviews also showed that data maturity is category-specific. R05 described relatively developed practices for steel and other metals, where EPDs and standardised approaches were increasingly available, but much weaker information for components. In one case, a component supplier appeared to have a low footprint because the calculation covered its own operations but excluded externally sourced cast parts. The figure was correct within that narrow boundary but incomplete from a value-chain perspective. A buyer comparing it with

an integrated supplier's broader footprint could therefore rank the component supplier more favourably even though a substantial share of emissions had merely been excluded from the reported boundary.

Comparability emerged as a particularly persistent constraint (R04, R11, R12). Suppliers may apply different system boundaries, allocation rules, databases, emission factors and reference periods. As a result, two apparently similar Product Carbon Footprints may not represent the same activities. Corporate-level ESG information may also say little about the specific product, material or site concerned by a tender.

This leads to an important distinction between primary and reliable data. Primary information was generally preferred because it could better reflect actual supplier operations, but it was not accepted automatically. Some organisations compared supplier values with internal estimates, database ranges or LCA models and retained a recognised secondary value when the primary calculation appeared incomplete or implausible. R14 described a formal process in which specialist review could reject an insufficiently documented supplier footprint.

Reliability also includes stability over time. A reported reduction may reflect a revised methodology or boundary rather than an operational improvement, complicating baselines and supplier comparisons. Timing creates a related problem: audited reports may become available only after a tender has been completed or after the firm's own reporting figures have already been validated. High-quality information can therefore arrive too late for the purpose for which it was requested (R02, R13).

Geographical differences were mentioned, but the evidence did not support a simple Europe-versus-rest-of-world distinction. Respondents identified mature suppliers in Europe, Asia, China, India and the United States, alongside less mature examples in each region. Supplier size, sector exposure, customer pressure and regulatory context interacted in shaping capabilities. Overall, Proposition 2 is strongly supported. In less mature settings, uncertainty arises mainly from missing data; in more mature settings, it increasingly concerns

comparability, granularity, methodological credibility and timing. A figure may be adequate for consolidated reporting while remaining insufficient for a procurement decision.

4.3 Firm Responses and Workarounds

Firms rarely stopped reporting or supplier-management processes while waiting for complete information. The most common immediate response was the use of recognised databases, industry averages, spend-based factors, generic emission coefficients and internal proxies. Ecoinvent and DEFRA were repeatedly mentioned. The selected approach depended on the purchasing category: physical units such as weight or distance could be used for some materials and logistics activities, whereas complex products required broader assumptions.

> *"Whenever we have specific supplier data, we use them. If not, we are basically forced to use Ecoinvent."*
>
> *R05, category management profile*

More mature organisations combined substitution with validation. Supplier-specific footprints were compared with benchmarks, internal LCA models and values from similar suppliers. Plausibility checks, specialist review and third-party verification helped determine whether primary information could replace a stable secondary factor. This hierarchy of evidence combined specificity, methodological transparency and verification: a robust benchmark could be preferred to an unverifiable supplier-specific figure.

Standardised questionnaires, platforms, dashboards and electronic interfaces helped structure recurring requests and consolidate large supplier populations (R04, R05, R06, R10). However, digitalisation did not resolve underlying methodological weaknesses. Suppliers could enter incomplete or company-level data into a platform, and repeated non-standardised questionnaires created fatigue among smaller suppliers. Technology improved traceability and scalability but did not replace professional judgement.

Supplier engagement represented a longer-term response (R02, R04, R12, R14, R15). Respondents described visits, workshops, quarterly reviews, technical guidance, corrective-

action plans and decarbonisation roadmaps. Firms often preferred development to immediate exclusion, especially where suppliers were technically important or difficult to replace. Contractual clauses, EcoVadis ratings, certifications, EPDs and audits further formalised expectations, although each instrument answered a different question. A rating could support prequalification without providing a product-level footprint, while an EPD could provide detailed information without guaranteeing direct comparability.

> *"For reporting, when data are missing, we use a database. (…) But in a tender, if data are missing and we have specifically asked for them, then that becomes a problem for the supplier."*
>
> *R09, sustainable procurement profile*

This statement captures the central distinction between reporting-grade and procurement-grade information. Estimates may complete a corporate inventory when assumptions are documented, but they cannot necessarily differentiate suppliers. Proposition 3 is therefore strongly supported. Firms manage imperfect information through substitution, validation, structuring and capability-building mechanisms. These responses allow reporting and supplier management to continue, but they manage uncertainty rather than eliminating it.

4.4 Influence on Procurement Decision Processes

The findings reveal a continuum of procurement influence. At one end, sustainability information is collected only for disclosure and emissions monitoring. It may then enter supplier databases, scorecards, contractual discussions and tender documentation. At the other end, it can change eligibility, evaluated cost, supplier selection, allocated volumes or development requirements. The organisation's position on this continuum depends not only on data maturity but also on the existence of a formal decision mechanism.

In several organisations, sustainability was visible without being decisive. R03 described supplier scoring in which sustainability theoretically represented part of the assessment, but could be covered through a general rating or default score. R10 described a carbon-adjusted

price using EUR 100 per tonne of CO2, but buyers continued to base decisions mainly on the direct financial price.

> *"Today, they mainly look at the net price, and not necessarily at the price including the carbon factor."*
>
> *R10, procurement excellence profile, translated from French*

Information had greater influence when connected to prequalification rules or minimum transparency requirements. Respondents reported the use of EcoVadis ratings, contractual reporting clauses and expectations that suppliers improve their carbon calculations within a defined period. Missing data could also be penalised through conservative assumptions. In one approach, a non-reporting supplier was assigned the most carbon-intensive production value, preventing non-disclosure from creating a competitive advantage.

The strongest example involved monetisation. In one anonymised industrial tender, an internal carbon price of approximately EUR 200 per tonne of CO2 was added to supplier offers. The selected option had a higher direct price but was associated with approximately 10,000 tonnes of estimated emissions, compared with around 24,000 tonnes for another option. Carbon influenced the award because it was translated into the same financial language as the purchasing price and incorporated into the decision formula.

Customer specifications created another binding mechanism. In the aluminium sector, requests for products below a defined carbon threshold required the organisation to source corresponding low-carbon input material. Similarly, R05 described environmental performance contributing to the selection of a supplier for an industrial project, while stressing that it remained one element within a broader commercial and technical assessment.

> *"It contributed to the overall assessment, but it was not the main factor. It added to the sum of criteria."*
>
> *R05, category management profile*

Regulatory and financial exposure could influence procurement indirectly. R08 described a lower-priced non-European offer being rejected because its emissions were insufficiently traceable and could create future carbon-related cost or compliance risk. This illustrates how carbon information can enter total-cost and risk calculations rather than operating as an independent environmental preference.

Counter-cases were equally important. R14 described a situation in which two suppliers disclosed footprints while a third did not, yet the non-reporting supplier was selected because of price. This suggests a transparency paradox: disclosure can reveal weaknesses and costs, while a supplier providing no data may continue to compete on traditional criteria unless missing information is penalised. The same respondent also described a lower-carbon purchase when supplier effort, price conditions and customer interest aligned, showing that data availability alone does not determine the outcome.

Sustainability information also affected the wider supplier lifecycle. Few respondents described immediate termination solely because data were weak. More common consequences included reporting clauses, improvement plans, corrective actions, closer monitoring and future volume discussions (R04, R05, R12). Operational improvements could also reduce emissions without carbon data being the original driver. R04's logistics example reduced cost, lead time and emissions simultaneously, supporting the observation that 'Lean is green'.

Proposition 4 is therefore conditionally supported. Supplier data and firm responses can influence prequalification, scoring, tendering, contracts, selection and development, but they alter supplier treatment only when connected to a translation mechanism such as a carbon price, threshold, penalty, contractual requirement, customer specification or regulatory exposure. Without such a mechanism, sustainability information may improve visibility while remaining secondary to price, quality, delivery and continuity.

4.5 Internal Coordination, Decision Rights and Trade-Offs

Supplier sustainability data were rarely managed by one function. Procurement and Supply Chain generally contacted suppliers and understood the commercial and operational context. Sustainability and LCA specialists defined requirements and assessed environmental meaning. Reporting teams consolidated information and ensured auditability, while Finance, Legal and Compliance could assess costs or incorporate clauses into contracts. Respondents described both formal committees and shorter informal communication channels (R01, R02, R06, R09).

However, coordination did not necessarily imply clear accountability or standardised practice. In decentralised structures, the reliability of supplier information could depend heavily on the experience of individual category managers. R04 argued that operational data ownership should remain close to Procurement or Supply Chain, because central ESG teams may be too distant from the activities producing the information.

> *“To be truly responsible for the data, you need to remain close to the operations.”*
>
> *R04, procurement and logistics profile, translated from French*

Data ownership also differed from decision ownership. Procurement could identify and negotiate a lower-carbon option while a business unit retained the final commercial decision. R03 highlighted a misalignment in which business units had emissions objectives but remained strongly evaluated on profitability, while buyers were rewarded mainly for negotiated savings.

> *“Even if the business unit has Scope 3 reduction objectives, when it must choose between a supplier that helps reduce Scope 3 and one that offers better financial profitability, it often chooses profitability.”*
>
> *R03, procurement sustainability profile, translated from French*

Cost was the most frequent trade-off (R03, R05, R08, R10, R14). Lower-emission materials, renewable energy and higher recycled content often involved a premium; one respondent referred to approximately EUR 300 per tonne in an anonymised example. The decisive question was whether customers accepted this premium. Firms located between upstream

material suppliers and downstream customers could be asked to offer lower-carbon products while customers continued to expect the conventional market price.

Delivery, technical performance and continuity of supply were also critical. Where few qualified alternatives existed, organisations sometimes retained suppliers with weak documentation and used audits, scorecards and corrective actions rather than exclusion. Sustainability generally operated as a differentiator between commercially and technically acceptable alternatives, not as a substitute for minimum quality or reliability. The absence of tension in some organisations may therefore indicate that sustainability had not yet gained enough decision power to challenge established criteria.

The findings nevertheless show that environmental and financial objectives can align. Initiatives reducing waste, transport distance, energy use or material consumption may support both sustainability and operational performance. Overall, the transition from reporting to procurement is therefore not solely a technical data challenge. It is also a governance and management-control challenge involving decision rights, incentives, ownership of additional costs and customer willingness to pay.

4.6 Future Expectations and Required Capabilities

Most respondents expected supplier sustainability data to gain procurement relevance, but not uniformly or automatically. Future use will require more specific, timely and methodologically consistent information, as well as greater independent verification. Several respondents expected the ability to provide credible carbon data to become a supplier capability comparable to other technical or management-system requirements.

Digital platforms and interoperability were considered necessary for handling repeated supplier requests, but the future challenge is to connect sustainability information with purchasing volumes, materials, contracts and sourcing events. A large database has limited procurement value if it remains separate from the systems and decision moments used by buyers.

Employee capability was another priority. Buyers do not need to become LCA specialists, but they need sufficient carbon literacy to distinguish primary data from estimates, interpret PCFs and EPDs, recognise inconsistent boundaries and request expert support. A scalable model combines distributed procurement knowledge with central sustainability and methodological expertise.

Supplier development will remain important, particularly for smaller firms unable to meet advanced requirements immediately. Because intensive engagement cannot cover the full supplier base, organisations are likely to prioritise high-emission, high-volume or strategically important suppliers. Clearer decision rules and aligned performance indicators will also be required; better data alone will not resolve a conflict between lower emissions, higher prices and savings-based buyer targets.

Respondents remained cautious about speed. Customer willingness to pay, carbon pricing, regulatory exposure, availability of alternatives and geographic differences may accelerate or constrain change. Future maturity should therefore not be assessed only through the quantity of primary information collected, but through the firm's capacity to validate data, integrate them into procurement systems and define how they affect supplier treatment.

4.7 Chapter Summary

The findings support the general logic of the conceptual framework while showing a progressive and conditional transition from reporting towards data-informed procurement. Proposition 1 is supported with the qualification that the CSRD mainly formalises and strengthens the auditability of supplier-data practices, alongside customer, strategic and financial drivers. Proposition 2 is strongly supported: constraints evolve from missing information towards methodological credibility, comparability, granularity and timing as maturity increases.

Proposition 3 is strongly supported, with firms relying on substitution, validation, structuring and capability-building mechanisms. These responses allow reporting and supplier management to continue but do not remove uncertainty. Proposition 4 is conditionally

supported: sustainability information affects procurement when it is sufficiently fit for the intended use and connected to a mechanism that changes eligibility, scoring, evaluated cost, contractual treatment, volumes or supplier-development priorities.

Overall, data become actionable when they are credible for the intended use, integrated into procurement processes and supported by a decision rule. Governance, market conditions and category measurability then determine whether they change supplier treatment.

5. Analysis

5.1 Overview

This chapter interprets the empirical findings in relation to the literature review, the initial conceptual framework and the four research propositions. The results broadly support the framework, but show that the pathway from CSRD-related Scope 3 pressure to procurement action is less linear than initially expected. Regulation increases the need for structured supplier information, yet customer requirements, internal climate commitments, sector initiatives and carbon-related financial mechanisms are also important drivers.

Three cross-cutting findings structure the analysis. First, data quality is purpose-dependent: information sufficient for reporting may be inadequate for supplier comparison. Second, firms manage imperfect data through substitution, validation, structuring and capability-building. Third, sustainability information changes supplier treatment only when connected to a decision rule and supported by appropriate governance and market conditions. The analysis therefore distinguishes reporting-grade from procurement-grade data, data maturity from decision maturity, and informational visibility from actual procurement influence.

5.2 CSRD as a Formalisation and Auditability Driver

Proposition 1 expected CSRD-related Scope 3 requirements to increase the need for supplier sustainability data in procurement decision processes. The findings support this proposition with an important qualification: the strongest effect of the CSRD concerned the formalisation, traceability and auditability of supplier-data processes rather than the direct transformation of supplier selection.

This is consistent with research showing that sustainability-reporting requirements must be translated into internal responsibilities, information systems and evidence trails (Adams & Abhayawansa, 2022). Lin (2022) further illustrates how national regulatory contexts can produce divergent non-financial reporting approaches, while Korca et al. (2023) show that reporting comparability depends on materiality, benchmarking and operationalisation choices. In the present study, the CSRD was associated with documented methodologies,

clearer ownership, stronger internal controls and evidence that could be defended during assurance.

Several mature firms nevertheless used the GHG Protocol, Life Cycle Assessment expertise or supplier-carbon initiatives before the CSRD became a central concern. For them, the regulation acted mainly as an accelerator and institutionalisation mechanism. This confirms the distinction between external and internal sustainability drivers identified by Saeed and Kersten (2019). The CSRD primarily increases demand for auditable information; SBTi commitments and internal targets establish reduction ambitions; customer requirements create commercial conditions; and carbon-related regulation may create financial or sourcing exposure.

Procurement becomes involved because it manages supplier access and commercial relationships. Buyers may distribute questionnaires, request Product Carbon Footprints and follow up on missing information. However, this functional involvement should not be confused with decision influence: data may be collected for reporting while supplier selection remains dominated by price, quality, delivery and continuity. Proposition 1 is therefore supported with the qualification that direct procurement effects depend on additional commercial, financial and organisational mechanisms. The refined framework consequently begins with a broader set of regulatory, market and strategic pressures rather than with the CSRD alone.

5.3 From Data Availability to Fitness for Use

Proposition 2 suggested that limitations in supplier sustainability data create uncertainty for procurement teams. The findings strongly support this proposition, while refining the meaning of data quality. The central issue is not simply whether a figure exists, but whether it is sufficiently credible, comparable, granular and timely for its intended use.

The Scope 3 literature anticipates reliance on estimates, emission factors and spend-based calculations when supplier-specific information is unavailable, particularly in complex and multi-tier supply chains (Schmidt et al., 2022; Canal Vieira et al., 2024). The interviews confirm

these constraints but show that they change with maturity. In less mature settings, the problem is the absence of primary information. In more mature settings, the challenge shifts towards methodological credibility: apparently similar Product Carbon Footprints may rely on different boundaries, allocation rules, databases or reference periods.

This challenges the assumption that primary data are automatically superior to secondary data. Primary information has greater potential specificity, but only when its methodology is transparent and plausible. Several firms preferred a recognised database value to a supplier-specific figure that could not be validated. Data maturity should therefore not be measured only through primary-data coverage.

The findings also qualify supplier-selection models that assume environmental indicators can be readily compared alongside price, quality and delivery (Govindan et al., 2015; Igarashi et al., 2013; Aktin & Gergin, 2016). Corporate ESG ratings, certifications, Product Carbon Footprints, Environmental Product Declarations and supplier trajectories answer different questions. Timing and category measurability matter as well: audited information may arrive too late for a tender, while standardised raw materials often provide more comparable units than complex components, services or multi-tier products.

Fitness for use is the degree to which information is sufficiently credible, specific, comparable and timely for a defined organisational purpose. Reporting-grade information prioritises completeness, consistency, traceability and auditability and may legitimately rely on transparent estimates. Procurement-grade information must additionally be sufficiently product-specific, comparable and timely for a particular supplier-related consequence. Proposition 2 is therefore strongly supported with this refinement: uncertainty is multidimensional and purpose-specific.

5.4 Firm Responses as Uncertainty-Management Mechanisms

Proposition 3 expected firms to respond to supplier-data limitations through proxies, questionnaires, platforms, audits, contractual clauses, engagement and supplier development. The findings strongly support the proposition, but show that these responses

perform different functions and are better understood as a portfolio for managing rather than eliminating uncertainty.

The four response categories are summarised in Table 1.

Table 1. Four mechanisms for managing supplier-data uncertainty

Mechanism	Primary role	Examples
Substitution	Fills immediate information gaps	Databases, industry averages and spend-based factors
Validation	Tests credibility and plausibility	Benchmarks, LCA review and third-party assurance
Structuring	Formalises collection and expectations	Questionnaires, platforms and contractual clauses
Capability-building	Improves future supplier data and performance	Workshops, roadmaps, guidance and supplier development

Note. Source: Author's own elaboration based on the interview findings.

These mechanisms enable different outcomes. Proxies improve reporting completeness but may conceal differences between suppliers. Validation strengthens confidence without necessarily ensuring comparability. Platforms reduce coordination costs but can organise poor-quality inputs more efficiently. Contractual clauses establish obligations without automatically creating the capability needed to comply. External ratings, EPDs and audits are therefore complementary rather than interchangeable.

Supplier development extends the collaborative approaches emphasised by Seuring and Müller (2008), Pagell and Wu (2009) and Meqdadi et al. (2017) by making data capability itself an object of improvement. This is particularly relevant for smaller or strategically important suppliers that cannot be easily replaced. Because collaboration is resource intensive, firms tend to combine broad reporting coverage with intensive validation and development for high-impact suppliers.

Proposition 3 is therefore strongly supported, with the refinement that firm responses constitute a transformation and governance stage. They determine how information enters the organisation, the confidence attached to it and whether it remains a reporting estimate or becomes sufficiently robust for procurement use. Several mechanisms can operate

simultaneously according to supplier importance, category maturity and the intended purpose of the information.

5.5 From Data Visibility to Procurement Consequences

Proposition 4 suggested that firm responses may influence procurement directly through prequalification, scoring, selection, renewal and development, and indirectly through coordination. The findings provide conditional support. Sustainability information is increasingly present in scorecards, tenders, contracts and supplier-development activities, but formal inclusion does not necessarily change an outcome.

Formal inclusion does not by itself demonstrate influence. Table 2 distinguishes the three levels observed in the interviews.

Table 2. Levels of supplier sustainability data integration in procurement

Level	Meaning	Decision implication
Formal inclusion	A criterion appears in a questionnaire, scorecard, tender or contract	Its presence does not prove that supplier treatment changes
Informational visibility	Procurement can access, compare or communicate the information	It informs awareness but may be overridden by other priorities
Consequential use	The information changes eligibility, scoring, evaluated cost, volume, contract terms, monitoring or development	It requires a translation rule and an actor with decision authority

Note. Source: Author's own elaboration based on the interview findings.

The quantified tender described in Chapter 4 illustrates this mechanism. Adding approximately EUR 200 per tonne of CO_2 to suppliers' offers changed the commercial ranking: the selected offer had a higher direct price but estimated emissions of approximately 10,000 tonnes rather than 24,000 tonnes for another option. By contrast, another firm calculated a carbon-adjusted price but continued to decide on the direct price. The difference was not the existence of data or a tool, but whether the adjusted value governed the award decision.

Missing-data rules also matter. Without a conservative default or transparency requirement, disclosure may create a transparency paradox: a supplier that reports its footprint reveals weaknesses and costs, while a non-reporting competitor continues to compete on price.

Transparency becomes commercially meaningful only when the buyer rewards disclosure or penalises its absence.

Governance moderates the process. Coordination between Procurement, Sustainability, Reporting, Finance and operational teams supports collection and interpretation, but decision rights determine who can act. Buyers may negotiate lower-carbon alternatives while the final decision remains with a business unit evaluated on profitability, and savings-based incentives may conflict with Scope 3 objectives. These tensions are consistent with Wu and Pagell (2011) and Hahn et al. (2015), who describe economic and environmental tensions as structural rather than purely informational.

Market conditions provide a second moderator. Credible data and internal willingness may still be insufficient where low-carbon options involve large premiums, scarce alternatives or supply-continuity risks. Conversely, customer specifications, carbon costs or operational benefits can make sustainability commercially relevant. Procurement influence should therefore be assessed across the supplier lifecycle, including prequalification, contract clauses, monitoring, corrective actions, development and future volume allocation.

Proposition 4 is consequently supported conditionally. Supplier sustainability data and firm responses create visibility; they generate procurement consequences only when connected to formal translation mechanisms and supported by aligned decision rights, incentives and market conditions. The study's contribution is therefore to identify the conditions through which sustainability information becomes actionable, rather than merely documenting its presence in procurement tools.

5.6 Cross-Cutting Contributions and Refined Framework

Three cross-cutting contributions emerge. First, data maturity and decision maturity are distinct. Data maturity concerns collection, documentation, validation and auditability. Decision maturity concerns the ability to connect information to sourcing events, define consequences, allocate authority and act through selection, contracts, volumes or supplier

development. An organisation may therefore possess advanced Scope 3 systems while using the information mainly for reporting.

Second, firm responses transform and govern imperfect information. Substitution, validation, structuring and capability-building determine whether information remains a generic reporting input, becomes visible to procurement or becomes fit for a defined decision. Third, translation mechanisms connect visibility to action. Internal carbon prices, thresholds, penalties, contractual requirements and customer specifications matter only when linked to an enforceable rule and an actor with authority.

Category measurability, internal governance and market conditions shape the process. Carbon information is easier to operationalise where suppliers use comparable physical units and sector methodologies, and harder for complex components, services and multi-tier products. Based on these insights, Figure 2 presents an empirically refined analytical framework. It is an analytical structure grounded in recurring interview patterns rather than a statistically validated causal model.

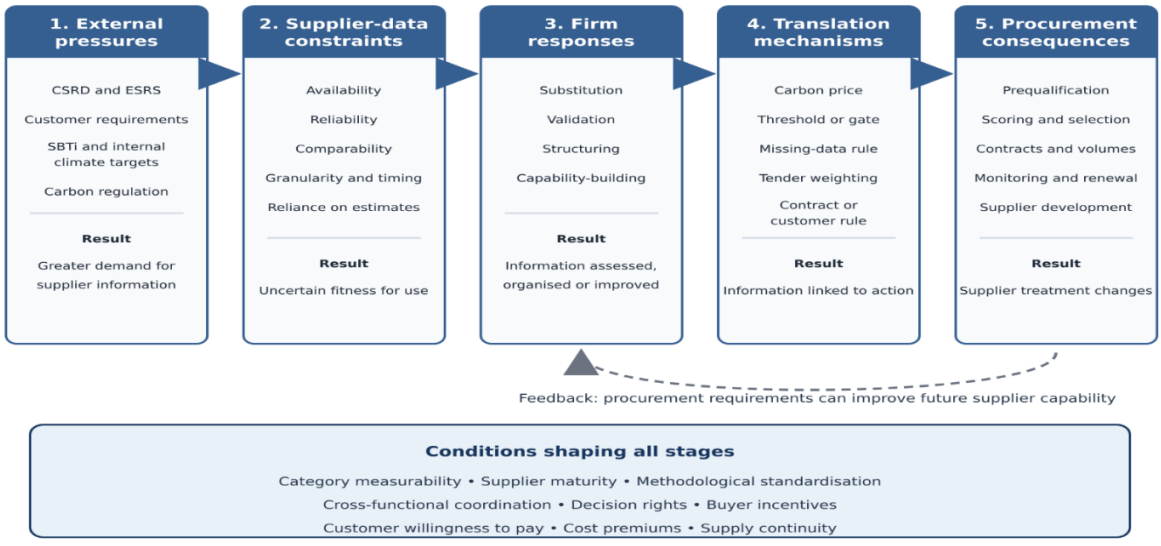


Figure 2. Empirically refined analytical framework for supplier sustainability data and procurement decision-making.

Source: Author's own elaboration based on the empirical findings.

As illustrated in Figure 2, regulatory, market and strategic pressures increase demand for supplier information, but data constraints limit its immediate usability. Firm responses assess and transform the information before translation mechanisms determine whether it changes supplier treatment. The framework also contains a feedback relationship: contractual requirements, scoring penalties, improvement plans and volume commitments can encourage suppliers to improve future data capability. The transition from reporting towards data-informed procurement therefore depends on obtaining information that is fit for use, integrating it into procurement processes and connecting it to a practical consequence.

6. Conclusion

This thesis examined how CSRD-related Scope 3 requirements affect the collection, assessment and use of supplier sustainability data in procurement decisions across European industrial contexts. The findings show that these requirements primarily formalise data requests, documentation, traceability and auditability. They involve buyers more directly in data collection, but do not automatically change supplier selection, which remains strongly shaped by price, quality, delivery, technical performance and continuity of supply.

The effect of the CSRD is therefore conditional and forms part of a broader set of pressures that includes customer specifications, SBTi commitments, internal climate strategies and carbon regulation. Supplier information can be adequate for an auditable Scope 3 inventory without being sufficiently reliable, comparable, granular or timely for a sourcing decision. Firms manage these limitations through substitution, validation, structuring and capability-building mechanisms.

Supplier data affect procurement outcomes when they are fit for the intended use and linked to a translation mechanism that specifies what the organisation must do differently. Carbon prices, transparency thresholds, missing-data rules, tender weightings, contractual obligations and customer requirements can provide this link. Decision rights, buyer incentives, category measurability, cost premiums and supply-continuity constraints determine whether the rule is applied in practice.

6.1 Theoretical Contributions

First, the study extends Scope 3 measurement research by treating data quality as purpose-dependent rather than as a single hierarchy from secondary to primary information. The distinction between reporting-grade and procurement-grade data shows that completeness and auditability can support disclosure while remaining insufficient for supplier comparison. The concept of fitness for use adds specificity, comparability and timing to reliability and explains why supplier-specific data are not automatically decision-ready (Schmidt et al., 2022; Canal Vieira et al., 2024).

Second, the findings qualify green supplier-selection models that assume an environmental criterion becomes influential once it is included in a scorecard or tender (Govindan et al., 2015; Igarashi et al., 2013). The distinction between formal inclusion, informational visibility and consequential use identifies a missing explanatory mechanism: sustainability information affects supplier treatment only when an explicit translation rule is connected to an actor with decision authority. This explains why CSRD pressure may strengthen reporting infrastructure without changing final awards.

Third, the study separates data maturity from decision maturity and recasts proxies, validation procedures, platforms, clauses and supplier development as uncertainty-management mechanisms rather than interchangeable tools. Data maturity concerns collection and assurance; decision maturity concerns the ability to connect information to sourcing events, consequences and authority. This distinction extends research on sustainable procurement under uncertainty by showing that organisational governance, not data availability alone, determines whether information becomes actionable (Wu & Pagell, 2011; Hald et al., 2021).

6.2 Managerial Contributions

The findings suggest five priorities for industrial firms. First, the intended use should be defined before the data requirement. Reporting, category screening, prequalification and tender comparison require different levels of specificity and assurance. Second, suppliers and categories should be segmented: broad coverage may use secondary factors, while high-impact or strategic categories justify specific footprints, verification and engagement.

Third, firms should establish a hierarchy of evidence and make validated information available at decision moments. The hierarchy should consider product or site specificity, boundaries, methodology, verification and stability over time. Fourth, organisations should define explicit translation mechanisms and missing-data rules, such as transparency thresholds, conservative defaults, tender weightings, internal carbon prices or improvement obligations. These mechanisms should first be piloted where data are sufficiently comparable.

Fifth, decision rights, incentives and capabilities must be aligned. Firms should clarify ownership of data, methodology and final decisions; determine who bears a sustainability premium; and complement savings-based buyer KPIs with realistic indicators of data quality, supplier engagement or emissions performance. Buyers require sufficient carbon literacy to challenge supplier information, while LCA and sustainability specialists should support complex validation.

Supplier inability should be distinguished from unwillingness. Repeated refusal may justify exclusion where alternatives exist, whereas willing but immature suppliers may require guidance, templates and staged development. A practical roadmap is to map high-impact uses, define data and validation rules, pilot decision mechanisms, align governance, integrate them into sourcing systems and evaluate whether they actually change supplier treatment or emissions.

6.3 Critique

With hindsight, the research design could have been strengthened by narrowing the empirical scope to one or two industries or purchasing categories and by building matched cases around buyers, sustainability specialists and suppliers involved in the same sourcing events. The broad sample made it possible to compare mechanisms across settings, but reduced sectoral comparability. Direct access to tender files, scoring matrices, contracts and award outcomes would also have provided stronger evidence than retrospective accounts and would have helped distinguish formal sustainability language from actual decision influence.

The interview design could not test symbolic compliance against substantive environmental and social commitment, nor selective Scope 3 reporting for strategic advantage. Addressing those questions would require confidential document analysis, direct observation and longitudinal outcome data. A second coder, respondent validation of case summaries and repeated interviews after regulatory changes would also have reduced interpretive and temporal uncertainty. These alternatives were not feasible within the thesis timeframe, so the

conclusions remain an exploratory explanation of reported mechanisms rather than a causal or prevalence claim.

6.4 Future Research

Future research could test the refined framework through larger surveys, longitudinal cases and direct observation of sourcing events. Particularly relevant avenues include comparing data maturity with decision maturity, examining measurable and complex purchasing categories, studying matched buyer-supplier relationships and assessing whether carbon prices, thresholds or missing-data penalties change supplier rankings, purchasing volumes and environmental outcomes. Research combining interviews with tender files, contracts and sustainability reports could also distinguish substantive commitment from symbolic compliance and examine whether selective Scope 3 disclosure creates strategic or economic advantages.

Overall, CSRD-related Scope 3 requirements are contributing to a more structured and auditable supplier-data environment, but the movement from reporting towards sustainable procurement is neither automatic nor uniform. The central challenge is not merely to collect more information, but to build the capabilities, governance arrangements and enforceable decision mechanisms required to act on data that are fit for their intended use.

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Appendix A. Anonymised Respondent Overview

Table A1. Anonymised composition of the interview corpus

Code	Generalised profile	Generalised sector	Mode	Language
R01	Extra-financial reporting	Specialty chemicals	Oral	French
R02	Sustainability / environment manager	Aerospace manufacturing	Written	English
R03	Procurement sustainability director	Specialty chemicals	Oral	French
R04	Procurement director, logistics / packaging	Specialty chemicals	Oral	French
R05	Global category manager, metals	Industrial equipment	Oral	English
R06	Head of management systems	Aluminium production	Oral	English
R07	Sales representative, industrial coatings	Aerospace supplier	Oral	English
R08	Climate / European regulation manager	Aluminium production	Oral + follow-up	English
R09	Two sustainable procurement specialists	Energy infrastructure	Oral	English
R10	Procurement excellence / sustainability manager	Specialty chemicals	Oral	French
R11	Managing director, aerospace metals	Metals distribution	Oral + follow-up	French
R12	Chief executive officer	Metals distribution	Oral + follow-up	English
R13	Project analyst / consultant, ESG and CSRD	Energy-infrastructure consulting assignment	Oral	French
R14	Procurement sustainability / innovation lead	Specialty chemicals	Oral	French
R15	Sustainability business manager / consultant	Cross-sector consulting	Written	French

Note. R09 represents one interview unit involving two respondents. The complete corpus contains 15 interview units, 16 individuals and 11 organisational contexts. Source: Author's own elaboration based on the interview corpus.

Appendix B. Analytical Blocks and Coding Structure

The deductive coding structure was derived from the literature review, research propositions and interview guide. Inductive codes were subsequently added when recurring mechanisms were not sufficiently represented in the initial structure.

Table B1. Analytical blocks used to structure the interview guide and first-cycle coding

Analytical block	Core dimensions	Purpose in the study	Main literature basis
Context and maturity	CSRD/Scope 3 maturity; supplier maturity; internal readiness; evolution over time	Establishes how prepared firms and suppliers are and how practices have evolved.	Saeed and Kersten (2019); Baumüller and Sopp (2022)
Supplier-data constraints	Availability; reliability; comparability; granularity; timing; estimates	Identifies why information may be insufficient for reporting or procurement use.	Schmidt et al. (2022); Li et al. (2020); Canal Vieira et al. (2024)
Firm responses and workarounds	Proxies; databases; questionnaires; platforms; audits; clauses; engagement	Examines how firms compensate for, validate or progressively improve imperfect data.	Meqdadi et al. (2017); Villena and Gioia (2018); Hald et al. (2021)
Procurement decision processes	Prequalification; scoring; tendering; selection; renewal; development	Identifies where supplier data or data limitations affect concrete purchasing processes.	Govindan et al. (2015); Igarashi et al. (2013); Wu and Pagell (2011)
Internal coordination and trade-offs	Procurement–ESG coordination; decision rights; cost–quality–continuity–sustainability tensions	Explores who collects, validates and uses the data and how competing objectives are managed.	Giunipero et al. (2012); Hahn et al. (2015); Wu and Pagell (2011)
Temporal evolution	Practices before CSRD; current implementation; expected future changes	Treats present practices as evolving rather than fully stabilised.	Baumüller and Sopp (2022); Directive (EU) 2022/2464

Source: Author's own elaboration based on the literature review and initial conceptual framework.

Table B2. Initial deductive codes and emergent inductive themes

Coding family	Main codes and indicators	Analytical use
Drivers and maturity	CSRD; ESRS; SBTi; customer requirements; carbon regulation; internal climate targets; firm maturity; supplier maturity	Compares the origins and level of formalisation of supplier-data practices.
Data constraints	Missing data; primary vs secondary data; methodology; boundaries; verification; comparability; product/site granularity; timing; estimates	Identifies the form of uncertainty and whether information is fit for a particular use.
Responses and adaptation mechanisms	Databases; proxies; spend-based factors; questionnaires; platforms; EPDs; ratings; audits; contractual clauses; supplier engagement; development plans	Distinguishes substitution, validation, structuring and capability-building responses.
Procurement influence	Prequalification; scoring; RFQ/tender; selection; evaluated price; contract clauses; renewal; monitoring; volume allocation; supplier development	Assesses whether information is formally present, visible or consequential.
Governance and trade-offs	Data ownership; methodological ownership; decision rights; buyer incentives; senior management support; cost; quality; delivery; continuity; willingness to pay	Explains the internal and market conditions that enable or constrain action.
Emergent concepts	Reporting-grade vs procurement-grade data; fitness for use; data maturity vs decision maturity; translation mechanisms; transparency paradox	Captures conceptual themes emerging from cross-interview comparison.

Note. The coding structure evolved iteratively. The terms "reporting-grade data", "procurement-grade data", "translation mechanisms", "decision maturity" and "transparency paradox" emerged during the inductive stage. Source: Author's own elaboration.

Appendix C. Full Semi-Structured Interview Guide – English

Research Question

How do CSRD-related Scope 3 data requirements affect the way European industrial firms collect, assess and use supplier sustainability data in procurement decision processes?

Introduction to the Interview

Thank you very much for accepting this interview.

The objective of my thesis is to understand how CSRD-related Scope 3 data requirements affect the way European industrial firms collect, assess and use supplier sustainability data in procurement decision processes.

The interview should last approximately 30 to 45 minutes. There are no right or wrong answers. I am mainly interested in your professional experience and perspective on the topic.

The information shared will be used only for academic purposes. Unless you explicitly agree otherwise, your name and company will be anonymised in the thesis.

With your permission, I would like to record the interview to facilitate accurate analysis. If you prefer not to be recorded, I will take detailed notes instead.

A common interview guide is used to ensure comparability, while the semi-structured format allows follow-up questions to be adapted to the respondent's role and expertise. Not all questions must be asked in every interview; the most relevant questions are prioritised according to the respondent's expertise and available time.

1. Respondent Profile and Organisational Context

1. Could you briefly describe your current role and main responsibilities?

2. How is your role connected to procurement, supplier management, sustainability, Scope 3 emissions or CSRD-related reporting?

3. Who is usually involved in supplier sustainability data topics in your organisation or professional experience?

2. Maturity and Evolution of Supplier Sustainability Data Practices

4. How mature would you say your organisation, or the organisations you work with, currently are regarding supplier sustainability data and Scope 3 requirements?

5. Before CSRD and Scope 3 became major topics, how were supplier sustainability data considered in procurement or supplier management?

6. Have you observed any changes in the way supplier sustainability data are collected, assessed or used in procurement?

7. If yes, to what extent do you think CSRD or Scope 3 requirements contributed to these changes?

3. Supplier Data Constraints

8. What are the main difficulties when collecting sustainability or Scope 3 data from suppliers?

9. Are supplier data generally available, reliable, comparable and granular enough to be used in procurement-related decisions? Why or why not?

10. Does timing create difficulties, for example when supplier data arrive too late to be used in tenders, supplier evaluations or contract discussions?

11. When primary supplier data are not available, what type of estimates or assumptions are usually used?

4. Firm Responses and Workarounds

12. When supplier sustainability data are incomplete, unreliable or unavailable, how does the organisation usually respond?

13. What types of workarounds are used to compensate for imperfect supplier data?

14. When suppliers lack maturity or data capabilities, does the organisation engage with them or support them rather than replacing them?

15. Are these workarounds used as inputs in procurement decisions, or are they mainly limited to reporting purposes?

5. Procurement Decision Processes

16. How, if at all, do supplier sustainability data—or the lack of such data—influence supplier prequalification, shortlisting or supplier scoring?

17. How, if at all, do Scope 3 or sustainability data influence supplier selection in RFQs, tenders or sourcing decisions?

18. Can supplier-data limitations affect contract renewal, contractual requirements or supplier-development plans?

19. Can you describe a recent supplier-related decision where sustainability data, or the lack of reliable data, played a role? The supplier, product or company names can be anonymised.

20. In practice, would you say that Scope 3 data currently influence actual procurement decisions, or are they still mainly used for reporting purposes?

6. Internal Coordination and Trade-Offs

21. How do procurement, sustainability, ESG/reporting, finance, legal or compliance teams coordinate around supplier sustainability data?

22. Are there tensions between cost, quality, delivery, supply continuity, compliance and sustainability when supplier data are discussed?

7. Future Expectations

23. In the coming years, do you expect supplier-data quality to become a more important procurement criterion?

24. What capabilities will firms need to develop to better integrate Scope 3 data into procurement decision processes?

8. Closing Question

25. Is there anything important about this topic that we have not discussed but that you think should be included in this research?

Source: Author's interview guide used for the empirical study.

Appendix D. Guide d'entretien semi-structuré complet – Français

Question de recherche

Comment les exigences de données Scope 3 liées à la CSRD influencent-elles la manière dont les entreprises industrielles européennes collectent, évaluent et utilisent les données de durabilité fournisseurs dans leurs processus de décision achats ?

Introduction à l'entretien

Bonjour, merci beaucoup d'avoir accepté cet entretien.

L'objectif de mon mémoire est de comprendre comment les exigences de données Scope 3 liées à la CSRD influencent la manière dont les entreprises industrielles européennes collectent, évaluent et utilisent les données de durabilité fournisseurs dans leurs processus de décision achats.

L'entretien devrait durer environ 30 à 45 minutes. Il n'y a pas de bonne ou de mauvaise réponse : ce qui m'intéresse surtout, c'est votre expérience professionnelle et votre perception du sujet.

Les informations partagées seront utilisées uniquement dans le cadre académique de mon mémoire. Sauf accord explicite de votre part, votre nom et celui de votre entreprise seront anonymisés.

Avec votre accord, j'aimerais enregistrer l'entretien afin de faciliter une analyse précise. Si vous préférez ne pas être enregistré(e), je prendrai des notes détaillées.

Un guide commun est utilisé afin de préserver la comparabilité des entretiens, mais le format semi-structuré permet d'adapter les relances au rôle et à l'expertise du répondant. Toutes les questions ne doivent pas nécessairement être posées ; les plus pertinentes sont privilégiées selon le profil et le temps disponible.

1. Profil du répondant et contexte organisationnel

1. Pouvez-vous brièvement décrire votre fonction actuelle et vos principales responsabilités ?

2. En quoi votre rôle est-il lié aux achats, à la gestion fournisseurs, à la durabilité, aux émissions Scope 3 ou au reporting lié à la CSRD ?

3. Quelles fonctions sont généralement impliquées dans les sujets liés aux données de durabilité fournisseurs dans votre organisation ou votre expérience professionnelle ?

2. Maturité et évolution des pratiques liées aux données de durabilité fournisseurs

4. Comment évalueriez-vous le niveau de maturité de votre organisation, ou des organisations avec lesquelles vous travaillez, concernant les données de durabilité fournisseurs et les exigences Scope 3 ?

5. Avant que la CSRD et le Scope 3 ne deviennent des sujets importants, comment les données de durabilité fournisseurs étaient-elles prises en compte dans les achats ou la gestion fournisseurs ?

6. Avez-vous observé des changements dans la manière dont les données de durabilité fournisseurs sont collectées, évaluées ou utilisées dans les achats ?

7. Si oui, dans quelle mesure pensez-vous que les exigences liées à la CSRD ou au Scope 3 ont contribué à ces changements ?

3. Contraintes liées aux données fournisseurs

8. Quelles sont les principales difficultés rencontrées lors de la collecte de données de durabilité ou de données Scope 3 auprès des fournisseurs ?

9. Les données fournisseurs sont-elles généralement suffisamment disponibles, fiables, comparables et granulaires pour être utilisées dans des décisions liées aux achats ? Pourquoi ?

10. Le timing pose-t-il problème, par exemple lorsque les données arrivent trop tard pour être utilisées dans un appel d'offres, une évaluation fournisseur ou une discussion contractuelle ?

11. Lorsque les données primaires fournisseurs ne sont pas disponibles, quels types d'estimations ou d'hypothèses sont généralement utilisés ?

4. Réponses des entreprises et solutions de contournement

12. Lorsque les données de durabilité fournisseurs sont incomplètes, peu fiables ou indisponibles, comment l'organisation réagit-elle généralement ?

13. Quels types de solutions de contournement sont utilisés pour compenser les imperfections des données fournisseurs ?

14. Lorsque les fournisseurs manquent de maturité ou de capacités en matière de données, l'organisation cherche-t-elle à les accompagner plutôt qu'à les remplacer ?

15. Ces solutions de contournement sont-elles utilisées comme inputs dans les décisions achats, ou restent-elles principalement limitées au reporting ?

5. Processus de décision achats

16. Dans quelle mesure les données de durabilité fournisseurs, ou leur absence, influencent-elles la préqualification, la présélection ou le scoring des fournisseurs ?

17. Dans quelle mesure les données Scope 3 ou de durabilité influencent-elles la sélection des fournisseurs dans les RFQ, appels d'offres ou décisions de sourcing ?

18. Les limites liées aux données fournisseurs peuvent-elles influencer le renouvellement des contrats, les exigences contractuelles ou les plans de développement fournisseurs ?

19. Pouvez-vous décrire une décision récente liée à un fournisseur dans laquelle des données de durabilité, ou l'absence de données fiables, ont joué un rôle ? Les noms du fournisseur, du produit et de l'entreprise peuvent être anonymisés.

20. En pratique, diriez-vous que les données Scope 3 influencent déjà les décisions achats réelles, ou qu'elles sont encore principalement utilisées à des fins de reporting ?

6. Coordination interne et arbitrages

21. Comment les équipes achats, durabilité, ESG/reporting, finance, juridique ou compliance se coordonnent-elles autour des données de durabilité fournisseurs ?

22. Existe-t-il des tensions entre coût, qualité, délais, continuité d'approvisionnement, conformité et durabilité lorsque les données fournisseurs sont discutées ?

7. Perspectives futures

23. Dans les prochaines années, pensez-vous que la qualité des données fournisseurs deviendra un critère achats plus important ?

24. Quelles capacités les entreprises devront-elles développer pour mieux intégrer les données Scope 3 dans les processus de décision achats ?

8. Question finale

25. Y a-t-il un élément important sur ce sujet que nous n'avons pas abordé et qui devrait, selon vous, être intégré dans cette recherche ?

Source : guide d'entretien élaboré par l'auteur et utilisé dans le cadre de l'étude empirique.

Appendix E. Short Interview Guide – English

This version was used when the respondent had limited availability or when a shorter written contribution was requested. It preserves the main logic of the research question while prioritising the most decision-relevant themes.

1. Could you briefly describe your role and its connection to procurement, sustainability, Scope 3 or CSRD?

2. How mature is your organisation regarding supplier sustainability data and Scope 3 requirements?

3. Have you observed any changes in the way supplier sustainability data are collected, assessed or used in procurement? If yes, to what extent do CSRD or Scope 3 requirements contribute to these changes?

4. What are the main difficulties when collecting Scope 3 or sustainability data from suppliers?

5. Are supplier data generally available, reliable, comparable and granular enough for procurement use?

6. What happens when supplier data are missing, incomplete or unreliable?

7. What types of workarounds are used to compensate for imperfect supplier data?

8. Are these workarounds used in procurement decisions, or mainly for reporting purposes?

9. Do supplier-data limitations influence prequalification, scoring, supplier evaluation, selection, contract renewal or supplier development?

10. Can you describe a recent supplier-related decision where sustainability data, or the lack of reliable data, played a role? The supplier, product or company names can be anonymised.

11. How do procurement, sustainability and reporting teams coordinate around supplier data?

12. How do you expect supplier-data requirements to influence procurement in the coming years?

Source: Author's short interview guide used for 20–25 minute interviews and written contributions.

Appendix F. Guide d'entretien court – Français

Cette version a été utilisée lorsque le répondant disposait de peu de temps ou lorsqu'une contribution écrite plus courte était demandée. Elle conserve la logique centrale de la question de recherche en privilégiant les thèmes les plus directement liés aux décisions achats.

1. Pouvez-vous brièvement décrire votre rôle et son lien avec les achats, la durabilité, le Scope 3 ou la CSRD ?

2. Quel est le niveau de maturité de votre organisation concernant les données de durabilité fournisseurs et les exigences Scope 3 ?

3. Avez-vous observé des changements dans la manière dont les données de durabilité fournisseurs sont collectées, évaluées ou utilisées dans les achats ? Si oui, dans quelle mesure les exigences liées à la CSRD ou au Scope 3 contribuent-elles à ces changements ?

4. Quelles sont les principales difficultés lors de la collecte de données Scope 3 ou de durabilité auprès des fournisseurs ?

5. Les données fournisseurs sont-elles généralement disponibles, fiables, comparables et suffisamment granulaires pour être utilisées dans les achats ?

6. Que se passe-t-il lorsque les données fournisseurs sont manquantes, incomplètes ou peu fiables ?

7. Quels types de solutions de contournement sont utilisés pour compenser les imperfections des données fournisseurs ?

8. Ces solutions sont-elles utilisées dans les décisions achats ou principalement à des fins de reporting ?

9. Les limites liées aux données fournisseurs influencent-elles la préqualification, le scoring, l'évaluation, la sélection, le renouvellement des contrats ou le développement fournisseurs ?

10. Pouvez-vous décrire une décision récente liée à un fournisseur dans laquelle des données de durabilité, ou l'absence de données fiables, ont joué un rôle ? Les noms du fournisseur, du produit et de l'entreprise peuvent être anonymisés.

11. Comment les équipes achats, durabilité et reporting se coordonnent-elles autour des données fournisseurs ?

12. Comment pensez-vous que les exigences liées aux données fournisseurs vont influencer les achats dans les prochaines années ?

Source : guide d'entretien court élaboré par l'auteur et utilisé pour les entretiens de 20 à 25 minutes et certaines contributions écrites.

Appendix G. Illustrative Extract from the Cross-Interview Coding Matrix

The table below illustrates how evidence was compared across selected interview units representing different functions and sectors. It is an extract rather than the complete working matrix. The full matrix, transcripts and evidence bank are not reproduced in order to protect confidentiality and avoid indirect identification.

Table G1. Illustrative cross-interview coding matrix extract

Code / profile	Drivers and maturity	Main data constraints	Responses and workarounds	Procurement influence	Governance and trade-offs	Analytical contribution
R01 – Reporting specialist	CSRD mainly increases documentation, controls and auditability; established GHG calculation logic.	Large reliance on estimates; limited primary supplier data; supplier willingness and capability vary.	Generic factors, documented assumptions and stronger reporting controls.	Mainly reporting and target monitoring; Procurement supports supplier requests.	Reporting owns assurance; Procurement provides supplier access.	Distinguishes formalisation and functional involvement from direct decision influence.
R02 – Sustainability and environment manager	Supplier Scope 3 collection established before recent CSRD pressure; sustainability criteria increasingly formalised.	Limited primary emission factors; database specificity and verification issues.	Ecoinvent/DEFRA, proxies, EcoVadis, supplier engagement and contract clauses.	Ratings and clauses increasingly enter new-supplier evaluation and contract awards.	Sustainability defines expectations; Procurement applies them in supplier processes.	External industrial case showing gradual movement from reporting to procurement.
R03 – Procurement sustainability director	SBTi and internal climate targets were stronger initial drivers than CSRD; relatively high maturity.	Primary data increasingly available, but low-carbon alternatives often cost more.	LCA expertise, sector methodology, supplier PCFs, engagement and climate pledges.	Sustainability formally appears in scoring but price and profitability often dominate.	Business units retain final authority; buyers are evaluated on savings.	Shows that high data maturity does not automatically create decision maturity.
R04 – Procurement logistics director	CSRD and technology increase expectations and data flows in logistics.	Fragmented actors, inconsistent definitions and heterogeneous regional requirements.	GLEC-type factors, platforms, supplier roadmaps, quarterly reviews and operational projects.	Sustainability increasingly enters tenders; operational solutions may reduce emissions without carbon data being the initial driver.	Accountability should remain close to operations; ESG and Procurement must coordinate.	Adds operational and logistics perspective and supports the “Lean is green” counter-case.

Table G1 (continued). Illustrative cross-interview coding matrix extract

Code / profile	Drivers and maturity	Main data constraints	Responses and workarounds	Procurement influence	Governance and trade-offs	Analytical contribution
R05 – Global metals category manager	Metals categories are relatively mature; EPD use and supplier data have increased.	Good data for metals but major gaps for components and subcontractors; Scope 3 often omitted.	Ecoinvent fallback, plausibility checks, audits, scorecards and corrective actions.	Environmental data can differentiate suppliers or contribute to a choice, but usually alongside commercial criteria.	Category-manager judgement is important; premiums depend on customer willingness to pay and supply options.	Demonstrates category measurability, supplier dependency and sustainability as a conditional differentiator.
R08 – Climate and regulation manager	CSRD and carbon regulation strongly increased supplier-data requirements.	Fragmentation, time lags, weak non-EU or smaller-supplier capabilities and insufficient product granularity.	Ecoinvent/DEFRA, modelling, sector averages, scoring and planned contractual requirements.	Carbon metrics can act as a strategic filter; untraceable emissions can create sourcing and compliance risk.	Procurement, Sustainability, Finance and Legal contribute distinct roles.	Shows how regulatory or financial exposure can translate information into procurement relevance.
R09 – Sustainable procurement specialists	Sustainability is integrated through a structured procurement approach and explicit tender mechanisms.	Reporting estimates are insufficient for supplier comparison; missing information can create an advantage if untreated.	Spend-based reporting, tender-specific data requests, worst-case defaults, supplier engagement and internal carbon pricing.	A carbon price of approximately EUR 200/tCO2 changed the evaluated ranking and award outcome in one anonymised tender.	Decision rules connect sustainability, Procurement and commercial evaluation.	Strongest illustration of a translation mechanism converting visibility into a procurement consequence.
R14 – Procurement sustainability and innovation lead	Advanced supplier-PCF collection and validation; customer and climate objectives influence practice.	Primary values can be incomplete or methodologically unstable; comparable data remain difficult.	LCA validation, internal proxies, supplier trajectories and selective low-carbon purchases.	One non-reporting supplier was selected on price, while another lower-carbon purchase occurred when price and customer interest aligned.	Commercial priorities and customer demand determine whether data affect volumes.	Provides the transparency paradox and contrasting positive/negative decision cases.

Note. This table is an illustrative extract selected to show cross-functional and cross-sector comparison. It is not intended to reproduce every code or quotation. Source: Author's own elaboration based on the interview corpus.

Abstract

This thesis examines how CSRD-related Scope 3 requirements affect the collection, assessment and use of supplier sustainability data in procurement decisions. It draws on 15 interview units involving 16 respondents across 11 European industrial contexts.

The findings show that these requirements mainly formalise data collection, traceability and auditability, while availability, reliability, comparability, granularity and timing remain major constraints. Firms respond through substitution, validation, structuring and supplier capability-building.

However, reporting-grade information does not automatically become procurement-grade information. It influences sourcing only when it is fit for use and connected to mechanisms such as tender scoring, carbon pricing, missing-data rules or contractual requirements, supported by appropriate decision rights and incentives.

The thesis distinguishes data maturity from decision maturity and identifies a transparency paradox affecting suppliers that disclose imperfect primary data. Overall, CSRD-related requirements increase supplier visibility and procurement involvement, but their effect on supplier treatment remains conditional.

Keywords

CSRD; Scope 3 emissions; supplier sustainability data; sustainable procurement; procurement decision-making; industrial supply chains

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