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regulatory compliance for sustainability reporting**

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THE USE OF ARTIFICIAL INTELLIGENCE AND DIGITAL TOOLS IN REGULATORY COMPLIANCE FOR SUSTAINABILITY REPORTING¹

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1. The new regulatory context

Sustainability reporting is undergoing a structural transformation. For decades, environmental, social and governance disclosures were predominantly voluntary, oriented towards communication with stakeholders and based on non-binding reference frameworks.

This paradigm changed decisively with the approval of Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 (the *Corporate Sustainability Reporting Directive*, hereinafter “CSRD”), which imposes structured disclosure obligations aligned with the European Sustainability Reporting Standards (hereinafter “ESRS”) and subject to external audit assurance.

Even following the recent amendments at the end of 2025, imposed by EFRAG and approved by the European Parliament to adjust the quantitative thresholds, now set at 1,000 employees and EUR 450 million in turnover, the scope of application of the CSRD still extends to tens of thousands of companies within the European Union, including parent companies of non-European groups with significant activity in the internal market. The regulatory direction is unequivocal: sustainability reporting is moving towards a regime of information that is comparable, standardised and auditable.

It is within this framework that artificial intelligence (hereinafter “AI”) and digital tools gain operational relevance. The complexity of the requirements, namely, double materiality assessments, data disaggregation along the value chain, calculation of Scope 1, 2 and 3 emissions, integration with IT systems and third-party databases and

1. This Practitioner’s Note was not subject to peer review.

the compilation of financial and non-financial information, clearly exceeds the capacity of traditional manual processes.

The question is no longer whether these technologies should be used, but rather how quickly they should be implemented and how they should be governed. If the answer to “when” is straightforward – the sooner, the better – the governance mechanisms raise risks that must be properly mitigated.

2. The preparer’s perspective: from data collection to assurance of reliability

The information required to support the (many) quantitative and qualitative sustainability metrics is spread across different systems: ERP platforms, energy meters, procurement databases, supplier portals, human resources records, Excel files scattered across the organisation and more. There is a clear challenge related to both the quantity and quality of data. Key questions therefore arise: how can organisations ensure that data is complete, accurate and reconciled with financial information and how can the risk of inadvertent greenwashing arising from incorrect data capture or measurement be mitigated?

Moreover, the CSRD did not bring “only” more information to be reported. Reporting deadlines remain exactly the same as those for financial information. In other words, there is an additional timing challenge, in which the speed of data collection, processing and reporting is absolutely critical.

The use of digital tools is therefore essential. Only these platforms are capable of collecting, structuring and reporting all sustainability metrics efficiently within the tight timeframe required for regulatory compliance. Robotic Process Automation (RPA) enables the extraction, transformation and loading of structured and unstructured sustainability data, reconciliation of financial and non-financial information and application of the ESRS taxonomy at scale. Natural language processing can also extract information from contracts and

other reports to identify relevant disclosures, significantly reducing manual work.

In addition, in a regulatory environment characterised by rapid evolution, these digital tools enable swift analysis of legislative changes and mapping of organisational data to reporting obligations.

From a governance perspective, beyond the standard aspects applicable to all IT implementations, such as access rights reviews and controls over system changes and use, particular attention should be placed in the decision traceability and review processes. The implementation of a robust internal control environment is the responsibility of an organisation's governing bodies and represents an essential layer in concluding on the reliability of the reported data. Without these mechanisms, technological efficiency risks undermining reporting reliability, turning operational gains into a source of regulatory vulnerability.

3. The auditor's perspective: new tools, new risks

The widespread use of AI and digital tools in sustainability reporting processes requires auditors to adapt in two ways: first, by adopting similar tools to make their own audit procedures more efficient and scalable; second, by developing specific competencies to audit AI systems and assess the reliability of the data.

The use of AI by auditors enables the automated extraction and analysis of large volumes of sustainability data, the identification of risk patterns and inconsistencies in time series or for benchmarking against industry peers. Algorithm-assisted anomaly detection can reveal discrepancies that would escape traditional sampling-based reviews, increasing coverage without a proportional increase in effort. Automated generation of audit documentation and control narratives further reduces time spent on administrative tasks, allowing auditors to focus on professional judgment.

When organisations use AI in preparing sustainability reports, auditors must go beyond the resulting data and assess the systems themselves: model documentation, monitoring mechanisms for deviations and escalation procedures when anomalies or conflicting evidence arise. The opacity of certain models poses specific challenges: without explainability or traceability, it becomes difficult to justify the reported figures to regulators.

Three categories of risk warrant particular attention. First, bias: data may under-represent geographies, segments of the value chain or types of facilities, distorting estimates and decisions. Second, hallucinations and incorrect interpretations: generative AI may produce statements that appear plausible but are factually incorrect, requiring auditors to validate material assertions against verifiable primary sources and to avoid reliance on automatically generated narratives without independent review. Third, the risk of dilution of responsibility: accountability for published reports always resides with individuals. AI is a tool, not a responsible party.

4. Where technology reaches its limits

Despite significant advances in AI, technology does not replace professional judgment nor eliminate the need for context-based decision-making. Materiality assessments, interpretation of internal policies, estimation judgments and, above all, ultimate responsibility for reporting content remain inherently human.

AI operates on data and models. It does not fully understand economic, regulatory or reputational context in all its complexity. In sustainability matters, this context is decisive: the same metric may have very different relevance depending on sector, geography, business strategy or stakeholder expectations.

For this reason, effective regulatory compliance programmes should integrate AI as a decision-support tool rather than a substitute for human oversight. This requires robust governance frameworks,

including acceptable-use policies, clear allocation of responsibilities, continuous training programmes and control and escalation mechanisms.

The absence of such safeguards exposes organisations to regulatory, reputational and litigation risks and creates a critical gap between technological efficiency and the accountability requirements at the core of the CSRD regime.

5. Conclusion

Artificial intelligence and digital tools are now indispensable instruments for regulatory compliance in sustainability reporting. For preparers, they provide scale, consistency and automation. For auditors, they extend coverage, enhance anomaly detection and reduce administrative effort, while simultaneously requiring new capabilities to audit AI systems themselves.

The common thread across both perspectives is the irreplaceability of human oversight. Organisations that adopt these technologies without appropriate governance structures risk converting operational efficiency into regulatory and reputational exposure.

The strategic challenge, therefore, is not technological but one of governance: defining where automation adds value, where human judgment is indispensable, and how each decision throughout the reporting cycle is documented, monitored and attributed. In this sense, the responsible adoption of AI in sustainability compliance is itself a manifestation of the very principles that sustainability reporting seeks to promote transparency, accountability and a long-term orientation.