

xBRL EUROPE

32nd XBRL EUROPE DAYS
in Valletta (Malta)

23-24 May 2024

with the support of  FinanceMalta



Transforming ESG Compliance: The AI and XBRL Synergy

- Vlad KALASHNIKOV
- **EUNOIA LIMITED**
- Member of XBRL Europe

ESG Compliance in Europe

European ESG Landscape

- **Pioneering Regulatory Framework:** Europe leads with pioneering ESG regulations such as the EU Green Deal and SFDR. These initiatives position Europe as a global leader in sustainability.
- **Mandatory Reporting:** The EU mandates ESG reporting for large companies, emphasizing transparency, which is enforced through directives like CSRD.
- **Integration of ESG into Business Strategy:** Europe integrates ESG factors into business practices and investments, aimed to foster a greener economy through sustainable investments.

Key Regulations

- Corporate Sustainability Reporting Directive (CSRD)
- EU Taxonomy Regulation
- Sustainable Finance Disclosure Regulation (SFDR)



Current Challenges in ESG Compliance

Data Quality and Availability

- Inconsistent Data Sources - ESG data often comes from varied sources, leading to standardization issues.
- Lack of Historical Data - Limited historical data impacts trend analysis and strategy development.

Regulatory Complexity

- Evolving Regulations - Continuous adaptation needed for dynamic ESG regulations.
- Global Variability - Varying regional standards complicate multinational compliance.

High Costs and Resource Intensity

- Implementation Costs - Setting up ESG systems is expensive and resource-heavy.
- Ongoing Management - Continuous investment required to maintain compliance processes.

Measurement and Reporting Challenges

- Lack of Standardization - No standardized metrics for ESG performance comparison.
- Complex Reporting Requirements - Detailed reporting requirements increase company burdens.

Stakeholder Pressure

- Investor Expectations - Investors demand detailed and transparent ESG disclosures.
 - Public and Consumer Scrutiny - Heightened scrutiny on corporate sustainability practices.
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Role of AI in ESG Compliance

AI can enhance ESG compliance by processing large datasets, identifying patterns, and ensuring data accuracy.

With the rise of **Large Language Models (LLMs)**, AI is promising to be a game changer in the future of ESG Reporting.

AI can help companies in several ways:

- Automated ESG data collection
- Understanding context from unstructured company sustainability data
- Trends analysis in ESG performance
- Cross-verification of CSRD tagged data for accuracy
- Forecasting future ESG performance
- Automated sustainability reporting
- And so much more...



Synergy between AI and XBRL

The XBRL digital reporting standard helps ensure data accuracy, consistency, and makes the reporting data more accessible and easier to analyse.

For the upcoming **CSRD** requirement, companies that are required to report under this directive would need to submit their reports in XBRL format.

The synergy between AI and XBRL revolutionizes ESG compliance by **combining the strengths of both technologies**.



Synergy between AI and XBRL



Finance and Sustainability Teams - AI can automate the tagging of ESG data with XBRL, reducing manual effort and ensuring accurate, consistent CSRD compliant reports. By leveraging LLMs, AI can learn the context of the report and use XBRL reports from past submissions to automate the tagging process.



Auditors - AI enhances the accuracy of ESG data by cross-verifying XBRL-tagged information, streamlining the audit process. It facilitates easy comparison with past submissions, ensuring compliance and increasing the reliability of ESG reports.



Investors – AI standardizes ESG data through XBRL, improving transparency and comparability. Predictive analytics and trend analysis offer deeper insights into ESG performance, enabling better risk and opportunity assessment.



Applications of AI in ESG Reporting

Finance and Sustainability Teams



Automated Tagging of XBRL data – LLM models can automate the tagging of sustainability reports with XBRL by understanding the context of the document and leveraging publicly available XBRL submissions submitted by other entities in Europe. This can save a lot of time and reduce manual errors in CSRD reporting.



Contextual Report Building – All documents and data sources related to ESG data can be uploaded in a “data lake” and LLM models either through chat bots or similar, can be used to support sustainability teams in drafting the sustainability reports, in accordance to the regulatory requirements.



Advanced Predictive Analytics - AI can analyse historical ESG data to predict future trends and performance. This helps in strategic planning and setting realistic sustainability goals.

Auditors



Contextual Analysis of Reports - LLMs can understand the context of ESG reports and related documents. This technology provides insights and highlights key areas that need attention, thus improving the audit process efficiency. Additionally, AI can learn from past CSRD submissions to assist in tagging reviews, ensuring consistency and accuracy in the evaluation process.



Automated Compliance Checks - AI can conduct automated compliance checks against the latest regulatory standards and frameworks, ensuring that ESG reports meet all necessary legal and regulatory requirements. This process not only saves time but also reduces the risk of human error, enhancing the overall reliability and credibility of the reports.



Efficient Anomaly Detection – AI can quickly identify anomalies or inconsistencies in sustainability reports such as incorrect tagging, changes between the PDF reports and the XHTML reports, as well as inconsistent reporting of data.

Investors



Enhanced Comparability - Standardized XBRL data, combined with AI, simplifies identifying and analysing trends across different sectors, regions, or time periods. This seamless data comparison helps investors detect emerging opportunities or potential risks, guiding more informed investment decisions.



Risk Management - Using AI to analyse XBRL sustainability data allows investors to quickly assess a company's environmental, social, and governance (ESG) stability and health. This rapid evaluation helps identify potential sustainability risks, enabling proactive management of investment portfolios.



Integration with Diverse Data Sources - LLM models can contextualize information from sources like market trends and social media sentiment, combined with XBRL sustainability data, to provide a holistic view of a company's ESG performance. This supports more informed investment strategies, enabling stakeholders to make better decisions based on comprehensive data analysis.

Concerns and Challenges with Using AI for ESG



Data Privacy and Security Concerns – AI systems for ESG would be processing sensitive ESG data, raising privacy concerns



Transparency and Explainability – Many AI models function as “black boxes,” potentially reducing stakeholder trust due to the lack of clarity on how AI makes decisions and provides suggestions.



Lack of Data – Currently, there is a lack of data for ESG reporting, as companies have yet to publish sustainability reports in XBRL format. This scarcity may cause AI technologies to perpetuate biases, leading to skewed decisions.



Evolving Regulations – Regulations are constantly changing, requiring AI algorithms to adapt accordingly.



Future Trends of AI in ESG Reporting



AI at the core of the ESG reporting process



Fully-automated reporting (almost) through LLM models



Real-time access to ESG Reporting Data



Accurate predictions on ESG performance data



More stringent requirements necessitating detailed ESG disclosures

Conclusion

Integrating AI with XBRL is revolutionizing ESG reporting by enhancing accuracy, efficiency, and providing deeper insights. This synergy addresses current challenges, meets stringent regulatory requirements, and optimizes sustainability reporting processes. Embracing these technologies is essential for staying ahead in ESG compliance and making informed, strategic decisions.

Final Thought

The integration of AI and XBRL is not just a technological advancement but a strategic imperative for sustainable and transparent business practices!

Thank You!



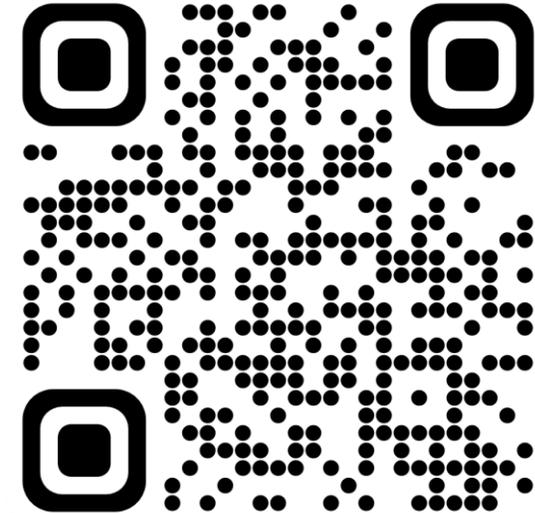
Vlad Kalashnikov
Eunoia Limited



vlad.kalashnikov@cfour.tech



+356 99034186



LinkedIn®

