



# Enhancing ESG data integrity and efficiency

Implementing machine learning-based anomaly detection for a global insurer



Capgemini, in collaboration with AWS, empowers a leading insurer's CFO organization to establish a robust foundation for future sustainability reporting by deploying a unique AI-driven anomaly detection solution.

## Navigating ESG data complexity

For many financial services organizations, Environmental, Social, and Governance (ESG) metrics and measurement have become top priorities, with nearly 70% reporting a substantial increase in focus and frequency of ESG-related reporting in 2024.<sup>1</sup>

Relevant data typically comes from numerous internal and external sources, covering a wide spectrum of sustainability factors, the dynamic nature of which requires continuous updates. This adds complexity to data management and makes it challenging to maintain confidence in the insights derived from ESG data.

**Client:** Leading global insurer

**Region:** North America

**Industry:** Insurance

### Client challenge:

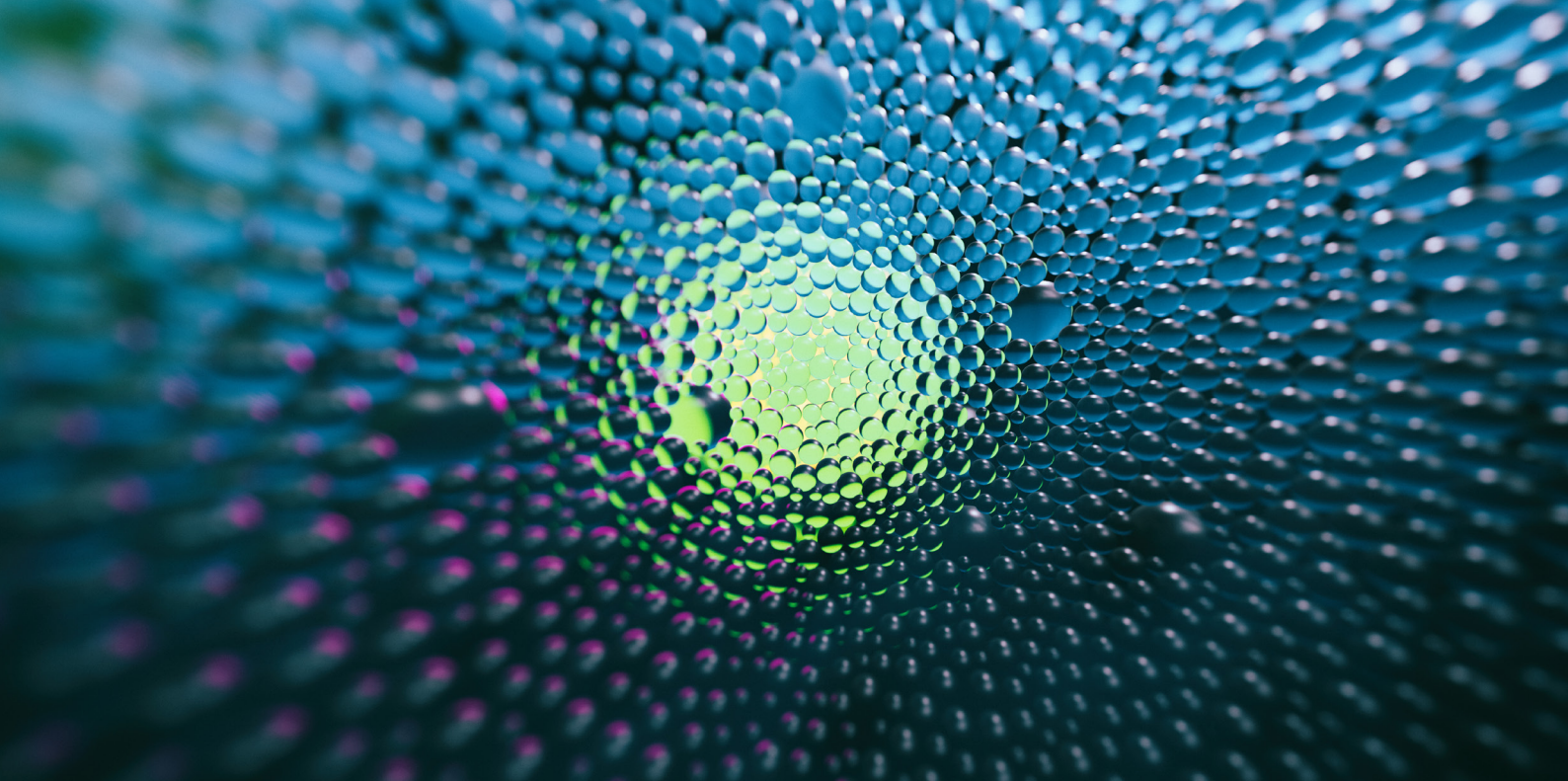
The insurer faced challenges managing complex ESG data from over 30 sources, exposing the company to significant audit and reputational risks.

### Solution:

Capgemini deployed a machine learning-based anomaly detection solution, empowering the insurer to uncover anomalies that traditional business rules had missed.

### Benefits:

- Boosts operational efficiency by 50% through eliminating manual reviews
- Improves data accuracy, enhancing CFO and sustainability reporting
- Scales to cover all ESG data sources, supporting growth and compliance
- Strengthens compliance by improving ESG reporting accuracy



In response to these challenges, a leading global property and casualty (P&C) insurer recently set out to build an extensive ESG data hub encompassing over 30 data sources across facilities, philanthropy, investment, and HR. During this project, the company needed to ensure data accuracy and consistency. However, the diverse mix of external and internal data sources created opportunities for errors and inconsistencies to go unnoticed.

Faced with these challenges and given that traditional monitoring approaches were insufficient due to this complexity, the insurer engaged Capgemini to help solve these ESG data monitoring challenges. The insurer required a robust solution to detect anomalies and errors in datasets, ensuring the integrity of the company's ESG reporting.

### **Implementing a tailored anomaly detection solution for enhanced ESG data integrity**

Capgemini's machine learning-based anomaly detection solution was customized and implemented in the insurer's environment to address their need for accurate detection across complex ESG datasets. The first use case focused on identifying anomalies in electricity and natural gas data across the insurer's various facilities, ensuring the integrity of its sustainability metrics.

Capgemini's ESG Data Store, Anomaly Detection, and AWS Solution Architecture teams collaborated closely with the insurer's Office of Sustainability, IT ESG team, and MLOps team. Together, they secured the necessary approvals and resources for implementing the solution, selected the most effective machine learning models, and deployed a seamless, end-to-end solution.

A standout achievement was the solution's ability to detect previously unidentified data issues that conventional business rules had missed. This accuracy improvement significantly reduced manual effort, enabling the insurer to achieve more reliable ESG reporting and better decision-making. The solution not only met the company's initial needs but also provided a scalable approach to handle growing ESG data demands across additional sustainability metrics in the future.

### **Achieving efficiency, accuracy, and scalability in ESG data management**

Since implementing Capgemini's machine learning-based anomaly detection solution, the insurer has significantly improved the accuracy and efficiency of its ESG data management processes. With this solution, the company can now automatically identify anomalies and their root causes, which reduced the time spent on management by 50% while simultaneously reducing risk.

Moving forward, the insurer plans to expand the solution across all data sources within its ESG data hub to ensure even greater accuracy and efficiency in sustainability reporting. Capgemini is also collaborating with the insurer's executive team to extend the solution to other departments that could benefit from this capability.

Additionally, Capgemini will also provide training to equip the company with the skills needed to independently build and deploy anomaly detection models, which will support the insurer's long-term goals of scalability and self-sufficiency in ESG data management. This strategic expansion will further enable the organization to meet compliance and reporting requirements and advance its broader sustainability objectives.



## About Capgemini

Capgemini is a global business and technology transformation partner, helping organizations to accelerate their dual transition to a digital and sustainable world, while creating tangible impact for enterprises and society. It is a responsible and diverse group of 340,000 team members in more than 50 countries. With its strong over 55-year heritage, Capgemini is trusted by its clients to unlock the value of technology to address the entire breadth of their business needs. It delivers end-to-end services and solutions leveraging strengths from strategy and design to engineering, all fueled by its market leading capabilities in AI, cloud and data, combined with its deep industry expertise and partner ecosystem. The Group reported 2023 global revenues of €22.5 billion.

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