Revolutionizing ESG Analytics

How Automation Helped a Building Materials Manufacturer Reduce Scope 3 Emissions

Highlights

- Scope 3 emissions reduction ESG Analytics across 4 regions
- Data lake on AWS
- Data Visualisation on Qlik Sense
- Delivered in less than 4 months

Client Overview

Leading players in the construction and building materials industry.

Focus on sustainable business practices, the company has set ambitious targets to reduce its carbon footprint.

Problem Statement

Challenge in reporting carbon emissions, including **Scope 1, Scope 2, and Scope 3**.

The company targets reduction of 520kg CO_2 per ton of cement by 2030, it **needs to ensure accurate reporting** of its carbon footprint.

Scope 3 emissions reporting is particularly complex, as it includes **indirect emissions** from activities such as transportation and product use.

Key Challenges

- Non-availability of **real-time insights** due to operational efficiencies
- Limited **transparency and visibility** on emissions data across the organization
- Difficulty in **identifying opportunities** for emissions reduction and sustainability initiatives without accurate and reliable data
- Lack of **automated data collection** and integration systems
- Difficulty in **tracking indirect emissions** from suppliers and customers for Scope 3 reporting
- **Labor-intensive and time-consuming** ways to collate data & create reports

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Scope of the Project

- Streamline and automate the data organisation process.
- Leveraging cutting-edge cloud technology.
- Eliminate manual process of data collection and organising data from various sources.
- Minimise the loss of valuable time and resources.

Solution Implementation

The approach involved automating the manual process by

- **Creating a data lake**
- **Scalable modern data warehouse on AWS cloud**.

The solution also involved the use of AWS services such as **Amazon Redshift** and **Amazon AppFlow.** By utilizing Amazon Redshift and Amazon AppFlow, our team was able to develop a comprehensive solution that addressed the client's needs.

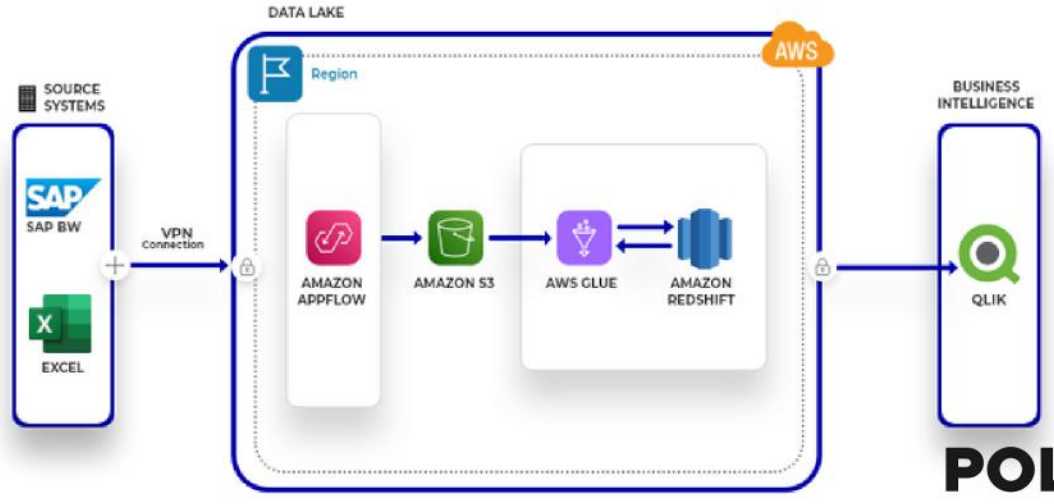
This resulted in improved efficiency, reduced costs, and better data quality for our client's business. To achieve this, we implemented the following steps:

✓ **Cleaning and ingestion** of data from various sources into the data lake with defined formatting and robust data management practices. This helped in ensuring that the data was accurate and of high quality.

✓ **Automated flow of data** from multiple data sources into the data warehouse. This helped in streamlining the process, reducing the time taken, and eliminating errors.

✓ **Defined KPIs** around various emission categories, as defined by the business, which were made available for Qlik consumption. This enabled the business teams to review them within a click of a button.

The solution helped in reducing the time taken to process data, improving data quality, and ensuring that the business teams had access to accurate and timely information.



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Impact Delivered

- Improved accuracy in reporting emission categories leading to a seamless year end audit.
- Enhanced data-driven decision making leading to improved sustainability efforts.
- Reduced risks associated with non-compliance with environmental regulations.
- Data consolidation complexities have been eliminated with the automation of source data.
- Manual business logic has been replaced with KPIs readily available, ensuring a scalable approach.
- Improved accessibility to data for leaders, enabling informed decisions regarding emission targets.
- Increased efficiency and productivity leading to cost savings for the company.
- Improved transparency and accountability leading to a positive impact on the company's reputation.

Client Feedback

We recently had an audit, and we are thrilled with the results.

The historical indicators were found to be highly reliable, the new indicators were thoroughly reviewed.

We were especially impressed by the strong internal controls that were put in place to handle variations, outliers, and missing data.

The audit highlighted the amount of work that has gone into adding new categories and ensuring the reliability of the other categories.

This is a testament to the dedication and hard work of the team that carried out the audit.

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