



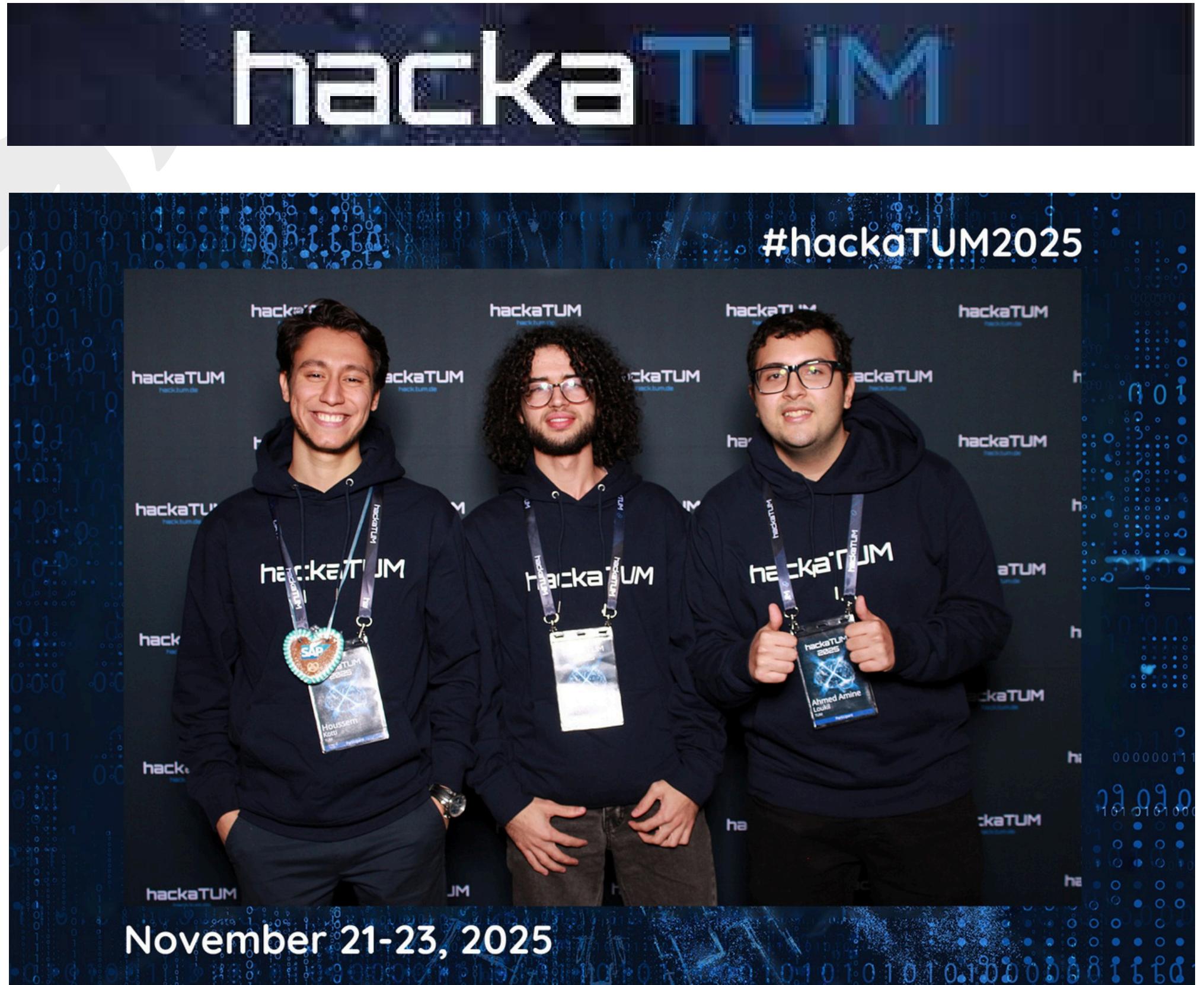
# Automated sustainability reporting

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# I- The Problem:

## ● Obligation to write annual reports

Companies must comply with CSRD, requiring structured sustainability reports.

Corporate Sustainability Reporting  
Directive (CSRD)

*Die neue EU-Richtlinie zur Unternehmens-  
Nachhaltigkeitsberichterstattung im Überblick*



- im bilanzrechtlichen Sinne große Unternehmen,
- im bilanzrechtlichen Sinne kleine und mittlere Unternehmen (KMU), die kapitalmarktorientiert sind,



## Incomplete Data

Data needed for these reports is scattered, often hidden in emails or unstructured text.



## Community Growth

Manual extraction is slow, error-prone, and expensive.



## II- Why This Matters ?

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- Fines and penalties for inaccurate reporting are increasing.
  - Businesses urgently need automated, reliable reporting tools.
  - Sustainability data is becoming a key factor in financing and partnerships.

## III- Our Solution

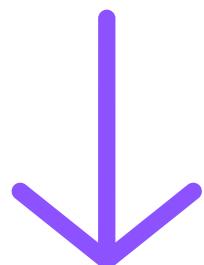
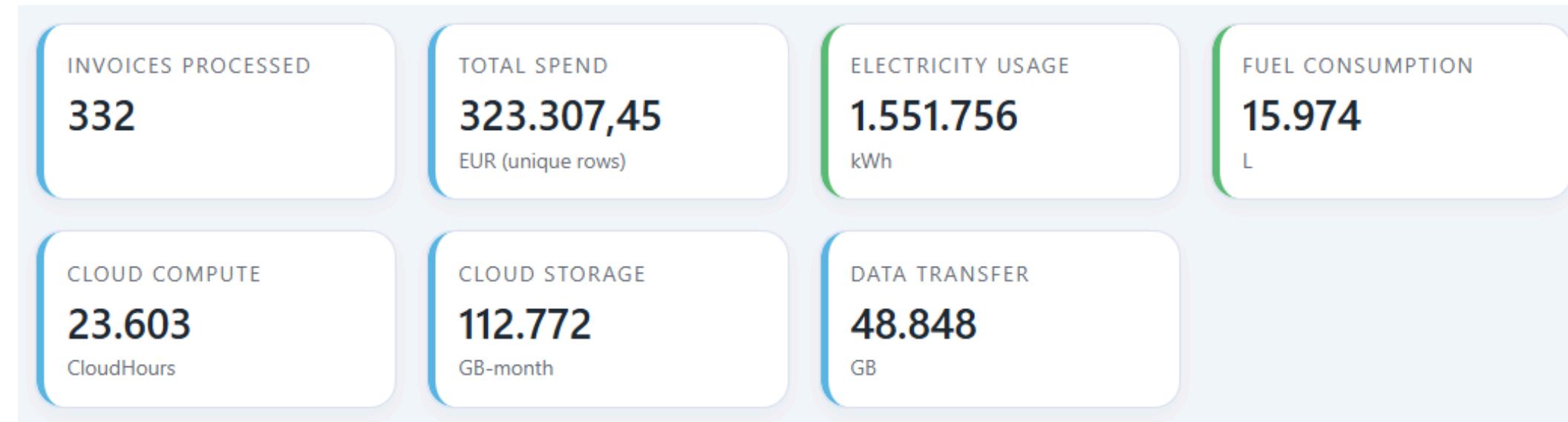
An **AI-powered** system that **automatically**:

- Extracts CO<sub>2</sub>, energy, and **sustainability** data from emails
- Classifies and validates the data
- Processes it through **SAP Build** Process Automation
- Generates **CSRD-ready statistics and structured reports**



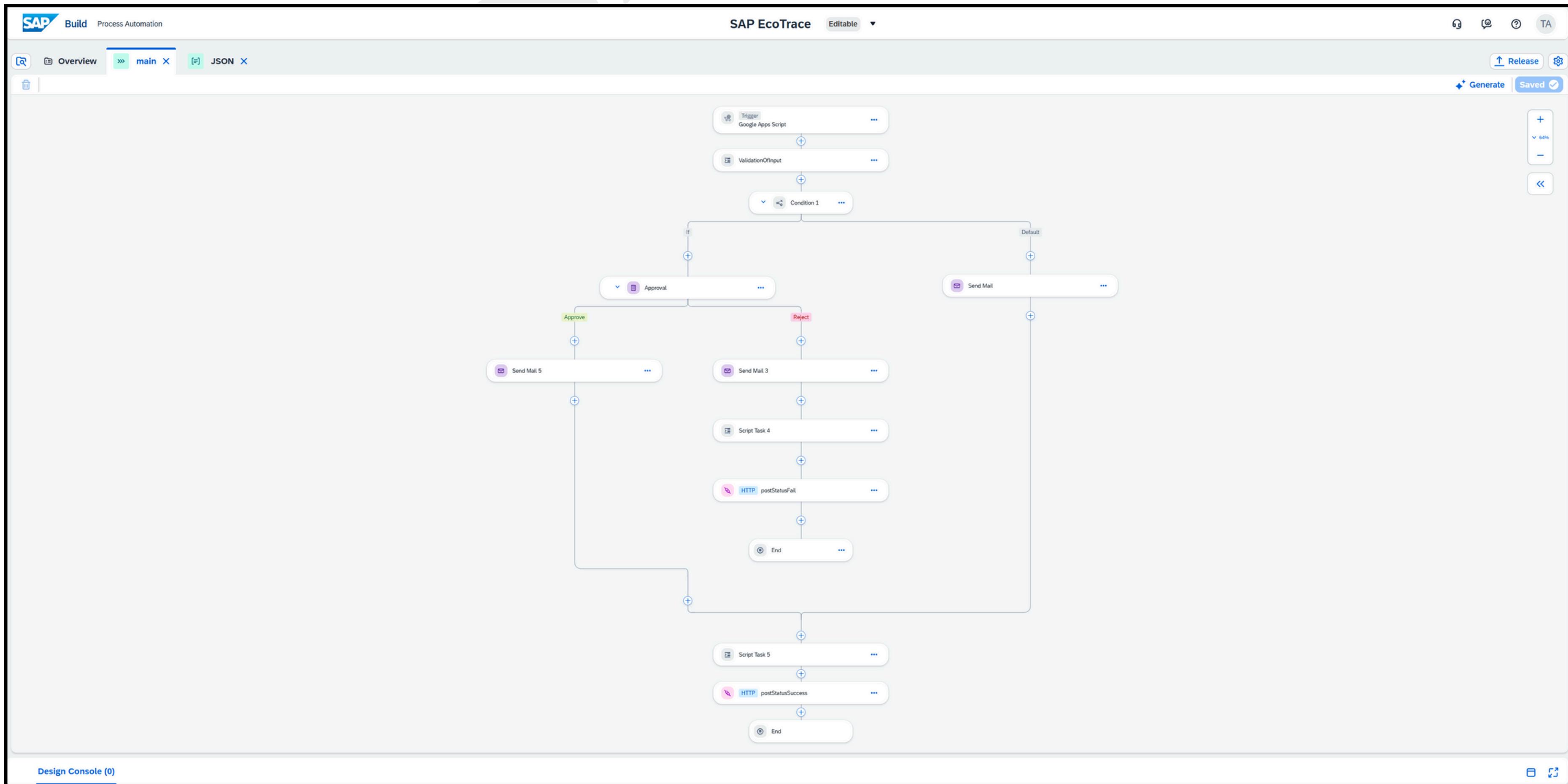
# III- How It Works?

1. Departments receive emails with **sustainability** data
2. AI classifier identifies relevant messages & filters emails

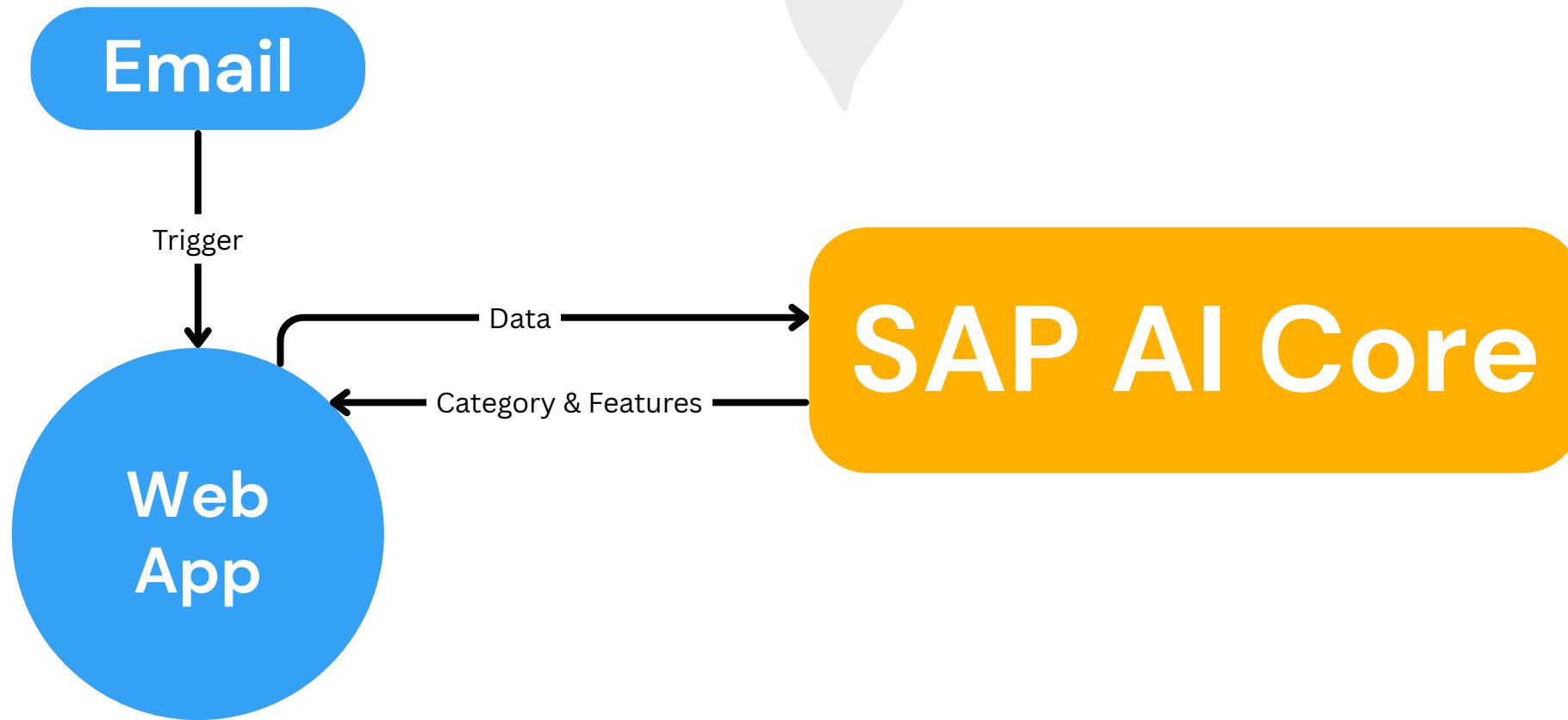


**SAP Build Process Automation**

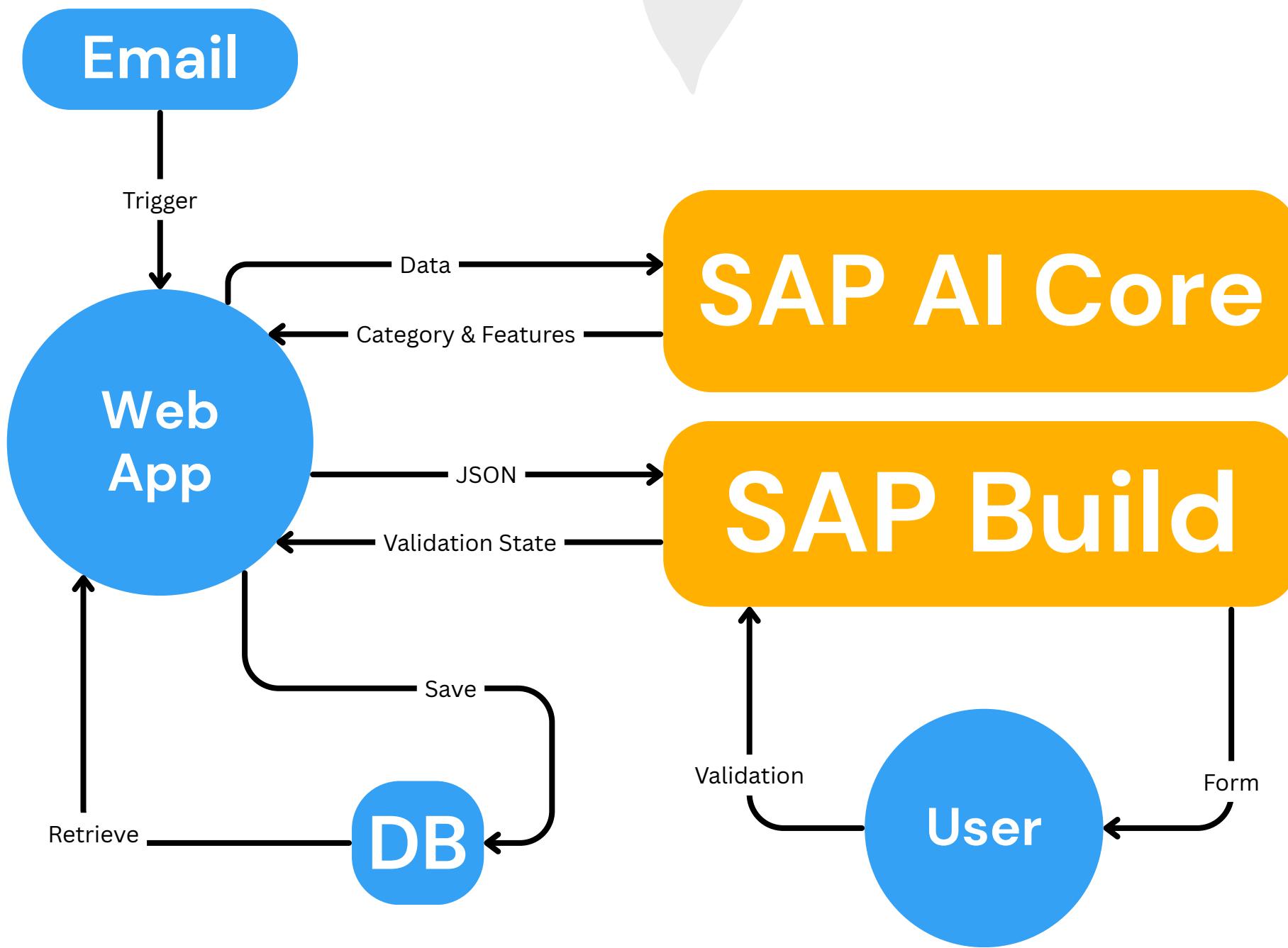
# SAP Build Process Automation



# Web-App validates & transforms the data

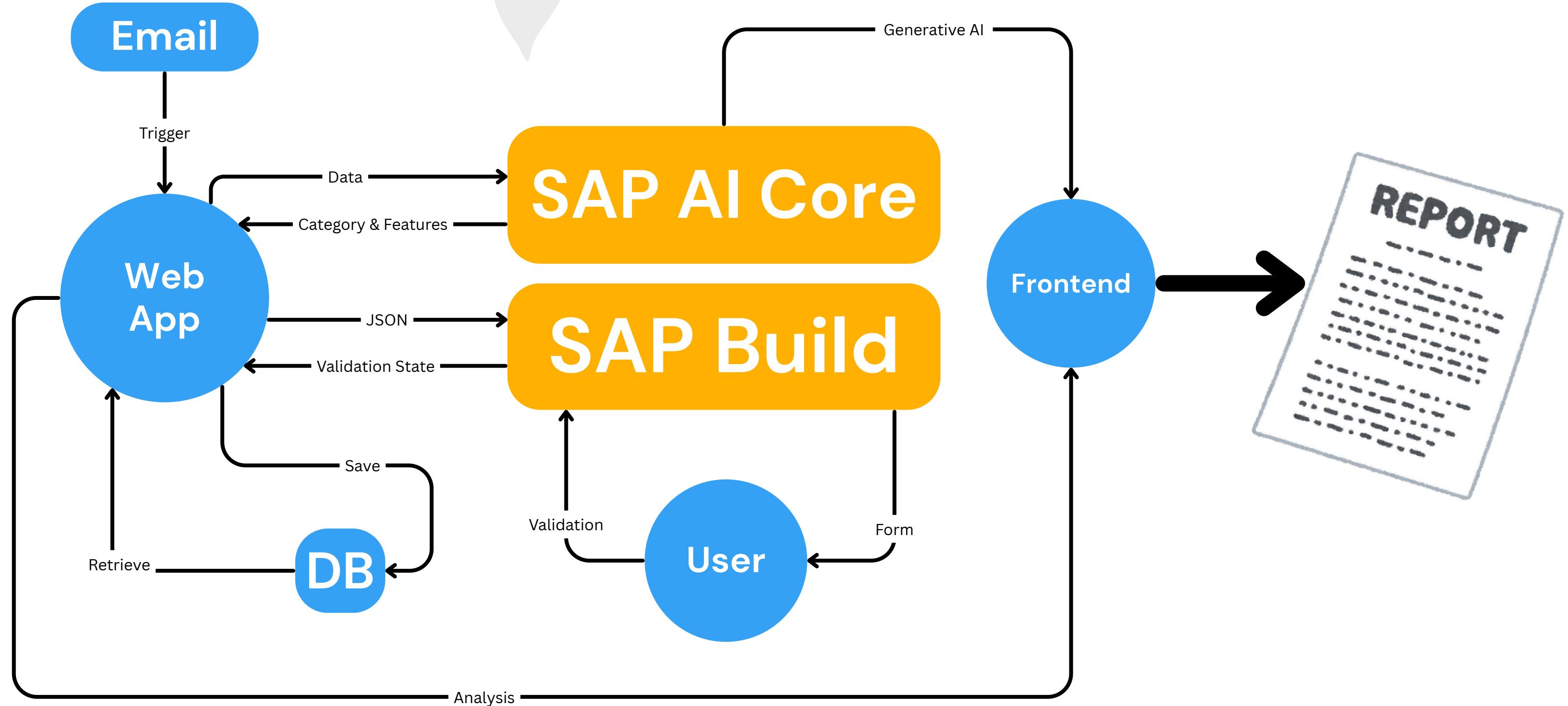


# API communication flow

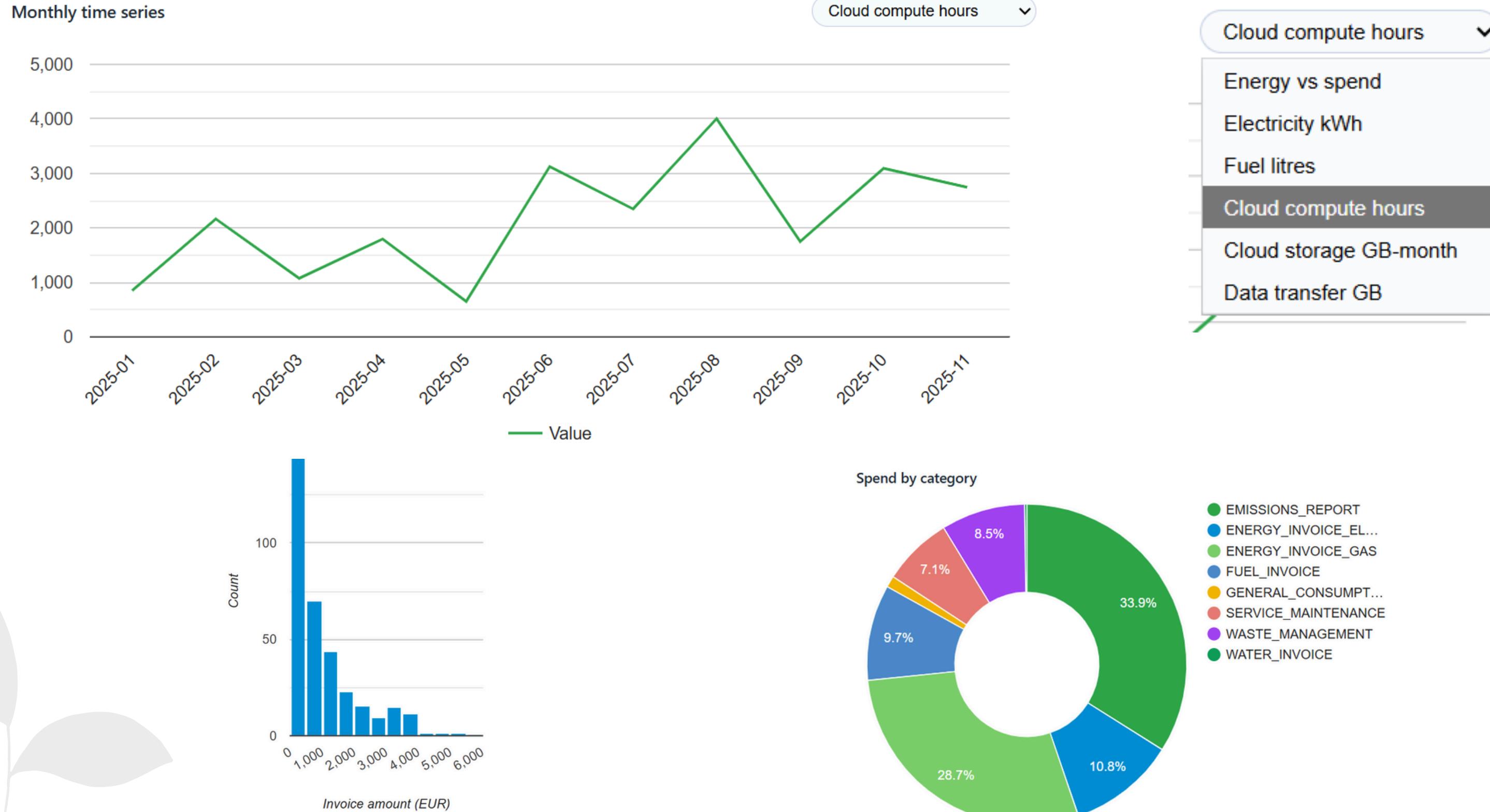


**REST APIs**

# Scalable & modular architecture



# Statistics are calculated & charts are created





# A CSRD-ready report is generated & ready for download

**SAP EcoTrace**

## SAP EcoTrace ESG Sustainability Report 2024

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### 1. Executive summary

In 2024, SAP EcoTrace's sustainability performance data, collected comprehensively across all 12 months, indicates a total related expenditure of approximately €344,232. This summary provides a high-level analysis of our environmental key performance indicators, focusing on the primary drivers of our footprint and the strategic allocation of resources towards its management. The data establishes a clear baseline that will be foundational for setting future reduction targets and measuring progress.

A primary driver of our environmental impact is energy and fuel consumption. For the reporting year, the company consumed 1,429,035 kWh of energy and 22,427 litres of fuel. The associated spend for these categories totaled over €183,000, representing more than half of our tracked sustainability-related expenditure. Notably, the cost of natural gas (€80,032) was substantially higher than that of electricity (€59,087). This reliance on gas presents both a financial risk due to price volatility and a key opportunity for targeted decarbonization efforts through electrification and investment in energy efficiency.

The company's digital infrastructure is another significant component of its environmental footprint. In 2024, operations utilized 21,759 cloud compute hours, 119,026 gigabyte-months of storage, and 46,459 gigabytes of data transfer. These metrics, which are proxies for the energy consumption of our data centers, highlight the growing importance of managing our digital carbon footprint. Optimizing cloud resource utilization and prioritizing partnerships with sustainable cloud providers are key levers for mitigating this impact.

An analysis of our sustainability spend structure reveals a strategic priority placed on robust measurement and reporting. The single largest investment, totaling €104,180, was allocated to emissions reporting services. This significant commitment ensures the company has a verifiable and auditable foundation for its carbon accounting. Other major operational cost centers, including energy (€139,119), fuel (€44,342), and waste management (€32,880), accurately reflect the key areas where future capital and operational efforts can be directed to achieve the most meaningful environmental improvements.

### 2. Key environmental metrics

Metric	Value	Unit
Invoices processed	343.0	
Total spend	344231.68	EUR
Electricity usage	1429035.000	kWh

### 3. Visual analysis

#### 3.1 Monthly energy consumption and spend

Month	Energy (kWh)	Spend (EUR)
January	46,358	16,391
February	60,926	22,405
March	111,865	33,205
April	111,865	33,205
May	111,865	33,205
June	111,865	33,205
July	111,865	33,205
August	111,865	33,205
September	111,865	33,205
October	111,865	33,205
November	257,504	42,814
December	111,865	33,205

Based on the provided data, energy consumption and spend for 2024 exhibited significant volatility. Consumption was at its lowest in January at 46,358 kWh and progressively climbed, reaching an initial spike in May. The absolute peak in consumption occurred late in the year, in November, at 257,504 kWh, suggesting that energy demand was highest during the colder months, likely driven by heating requirements. Following this peak, consumption decreased in December but remained at a high level compared to the first half of the year.

The related financial spend generally tracked the consumption pattern, with the highest expenditure of €42,814 also occurring in November. However, the correlation between energy volume and cost was not direct, indicating fluctuating unit prices for electricity. The lowest spend of the year was recorded in June at €16,391, a month which did not have the lowest consumption. This points to a more favorable energy price during that period compared to other months.

The most noticeable discrepancy highlighting price volatility occurred in the summer. For example, July's relatively low consumption of 60,926 kWh resulted in a very high spend of €33,205, suggesting a significant peak in the price per kWh. Conversely, April's much higher consumption of 111,865 kWh incurred a far lower cost of €22,405. This weak correlation between consumption volume and total spend

underscores the importance of managing not only the quantity of energy used but also the price exposure to market fluctuations.

#### 3.2 Spend by sustainability category

Category	Percentage
EMISSIONS REPORT	30.3%
ENERGY INVOICE GAS	23.2%
FUEL INVOICE	17.8%
GENERAL CONSUMPTION_NG	12.5%
SERVICE MAINTENANCE	5.5%
WASTE MANAGEMENT	3.8%
WATER INVOICE	0.0%

An analysis of the 2024 annual spend shows a clear concentration in emissions reporting and direct energy consumption. The single largest expenditure is on EMISSIONS\_REPORT at over €104,000, followed by significant costs for ENERGY\_INVOICE\_GAS (€80,032), ENERGY\_INVOICE\_ELECTRICITY (€59,087), and FUEL\_INVOICE (€44,341). These four categories represent the vast majority of the total spend, indicating they are the most financially material sustainability-related costs for the organization.

This spending pattern strongly implies that the company's primary environmental footprint is driven by its energy consumption. The high expenditure on gas, electricity, and fuel directly correlates with significant greenhouse gas emissions from operations. The substantial investment in emissions reporting, while a governance cost, further suggests that the company has a large and complex emissions profile to track. Consequently, the most impactful areas for reducing the company's environmental impact are energy efficiency initiatives and the transition to lower-carbon energy and fuel sources.

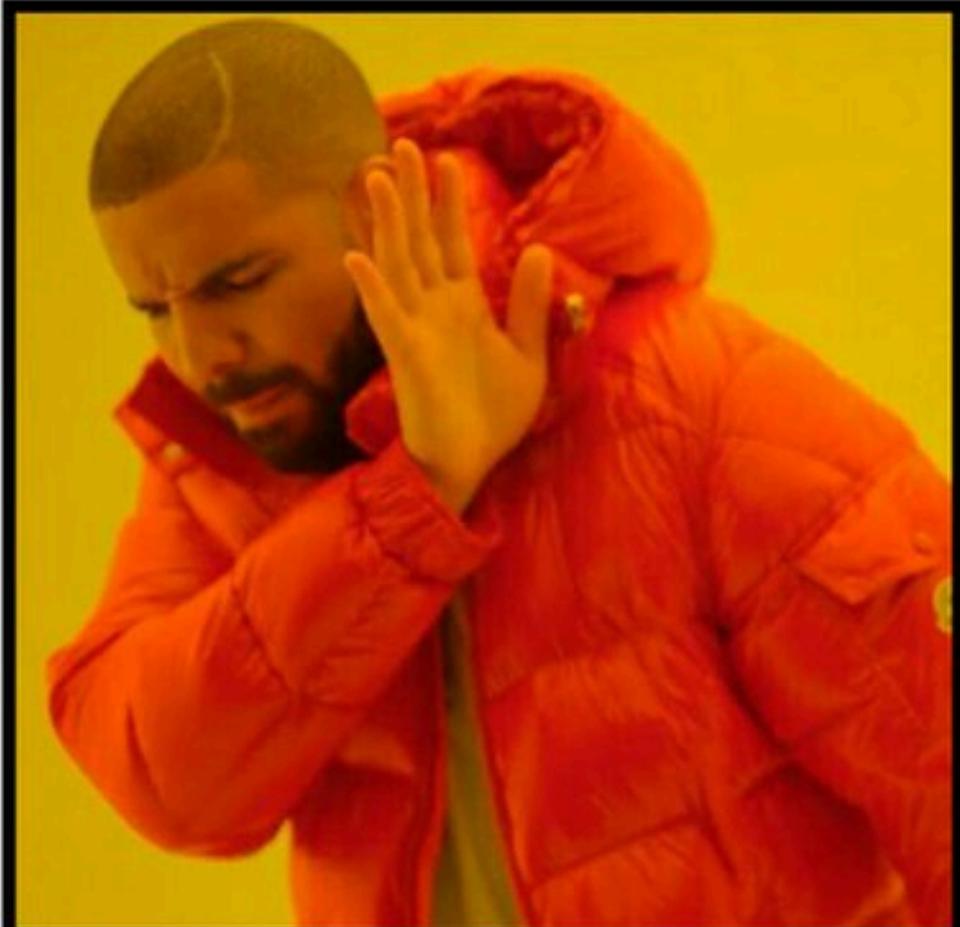
#### 3.3 Distribution of invoice amounts

In 2024, the company processed 343 invoices, with amounts ranging widely from as little as \$5.87 to a maximum of \$4,815.25. The distribution of these invoice sizes is notably skewed towards a larger number of smaller transactions. This is evidenced by the median invoice amount of \$786.27, which is significantly lower than the average (mean) amount of \$1,003.59. The higher average indicates that a number of high-value invoices are pulling the overall average up.

This cost structure, where a few large payments drive up the average, is further confirmed by the fact that 90% of all invoices were for amounts less than \$2,508.06. This means the top 10% of invoices account for a disproportionately large share of the total expenditure. In summary, while the majority of the company's transactions are for modest sums, the cost structure is heavily influenced by a minority of large invoices.

#### 4. Outlook and next steps

The current dataset provides a solid basis for tracking environmental performance over time. In the next expansion step, SAP EcoTrace can be extended with emission factors for electricity, fuel, cloud usage and logistics in order to calculate Scope 1, Scope 2 and selected Scope 3 greenhouse gas emissions. On top of that, the same pipeline can be reused to support CSRD reporting templates and internal management cockpits.



Writing 500 lines of backend  
code to automate workflows



Dragging and dropping blocks  
in  
SAP Build Process Automation

