# Greentally

*Made by: Albin Axelsson, Founder of A Triple C Consulting (A3C) and Head of Business Development at GreenTally.ai*

**Note:** This document/analysis is not legal advice

# GreenTally

## GreenTally.ai ESG Middle-Office Solution for FictionalCo

**Executive Summary:** GreenTally.ai offers a turnkey *ESG middle-office* service tailored for global real estate portfolios. We address the chronic problem of fragmented ESG data (from utility bills, meters, building systems, etc.) by automating data collection, cleaning, and consolidation. Our AI-driven platform integrates directly with assets and local operators, delivering audit-ready Scope 1–3 emissions reports, SFDR/EU Taxonomy-aligned disclosures, and exports compatible with FictionalCo's systems. Clients typically see ~90% reduction in reporting effort and seven-figure cost savings. With regulators and investors demanding transparency, now is the time for FictionalCo to deploy this solution.

### The Challenge: Fragmented ESG Data

ESG teams at global real estate funds struggle with **incomplete, siloed data**. Utility bills, submeters, BMS/EMS readings, and expense ledgers often never converge in one place. Data capture varies by region and property (some assets report live sensor data, others only manual spreadsheets), so gaps and inconsistencies are inevitable. In practice, this means fund controllers cobble together carbon and energy statistics from dozens of formats. Without a unified database, portfolios rely on reactive estimates and face audit risk. Private-equity real estate and unlisted debt exacerbate this: they span multiple countries, currencies and custodians with no standardized ESG templates. The result is high-cost manual consolidation, delayed reporting, and the danger of *misstated* emissions profiles.

**Key points:** ESG data originates from diverse sources (utility invoices, tenant meters, BMS telemetry, service orders) and is stored in disconnected silos. Inconsistent collection frequencies (some sites send monthly bills, others quarterly) create blind spots. These gaps force decision-making to be reactive rather than proactive, undermining optimization and compliance. Incomplete data also risks **inaccurate disclosures** – a concern highlighted by industry experts (complete, audit-grade data is essential for regulatory compliance and investor confidence).

**Picture 1: European Investment (Basic PE Structure)**
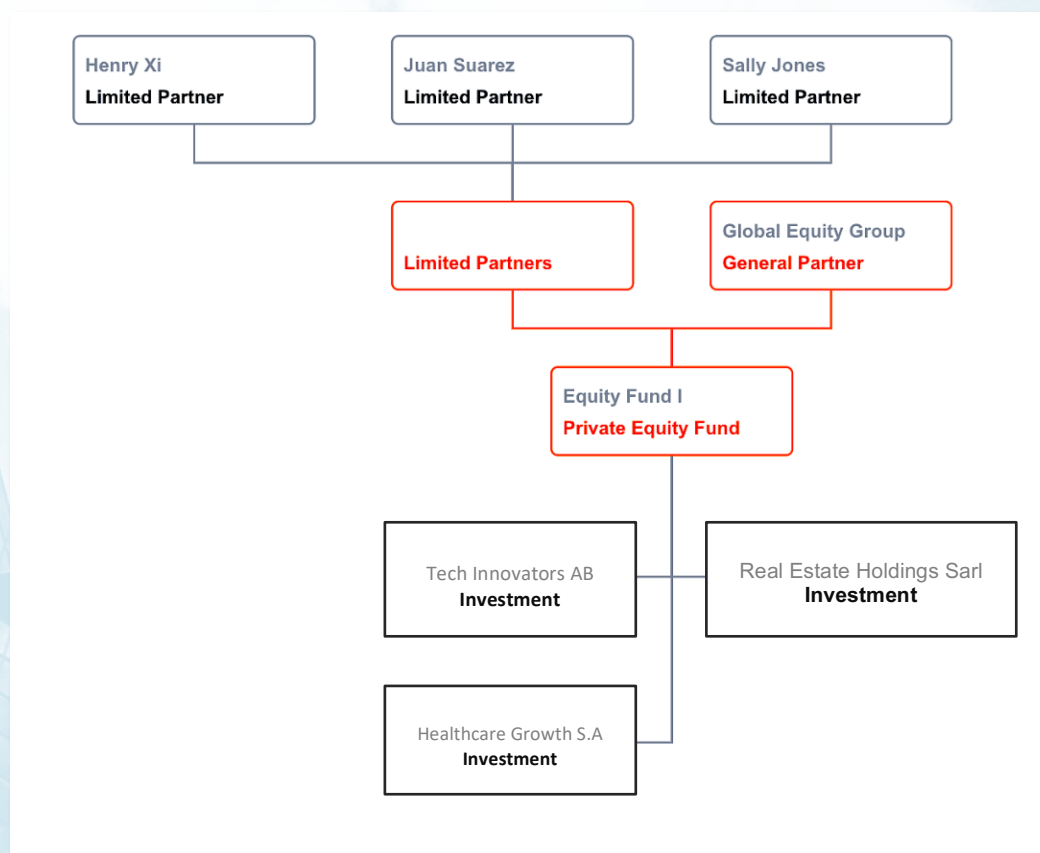


**Use Case Context: Cross-Border ESG Complexity with Simple Ownership**

This chart reflects a traditional PE structure with **direct investments** from the fund into target companies (no SPVs). One of the companies—**Real Estate Holdings Sarl**—is located in **Europe** and represents a typical situation for FictionalCo's ESG challenges in the region.

**ESG Challenge**

FictionalCo (GP) must consolidate ESG data from Real Estate Holdings Sarl located in, for instance, **France**, where energy billing is monthly, often paper-based, and varies between EDF, Enedis, and regional utilities. Meanwhile, **Germany** may report energy use under different energy intensity KPIs and use DIN 18599 energy standards. Even within a single country, **heat metering and tenant submetering** data might not be digitized.

**GreenTally's Role**

- Appoints a regional ESG **data liaison** to coordinate with Real Estate Holdings SARL's **facility managers and property agents**.

- Uses **machine-learning OCR** to extract carbon, water, and energy data from French invoices and normalize them to EU-compliant formats.

- Translates regional **primary energy demand values** into standardized emissions formats, aligned with the EU Taxonomy and SFDR Article 8/9 templates.
- Ensures **centralized digital access** to disparate utilities and legal documents via encrypted cloud repository.

**Output Example**

A dashboard showing:

- Scope 1 (fuel oil use for heating in older properties)
- Scope 2 (grid electricity and district heating)
- SFDR PAI metrics (GHG emissions per m², EPC rating)
- EU Taxonomy alignment for building renovation status

**Security Layer**

Only the GP (Global Equity Group) and ESG controller have access to full portfolio data. Property-level teams only view what's relevant to their asset.

**Picture 2: Advanced Global Structure (SPV & Holding Company)**
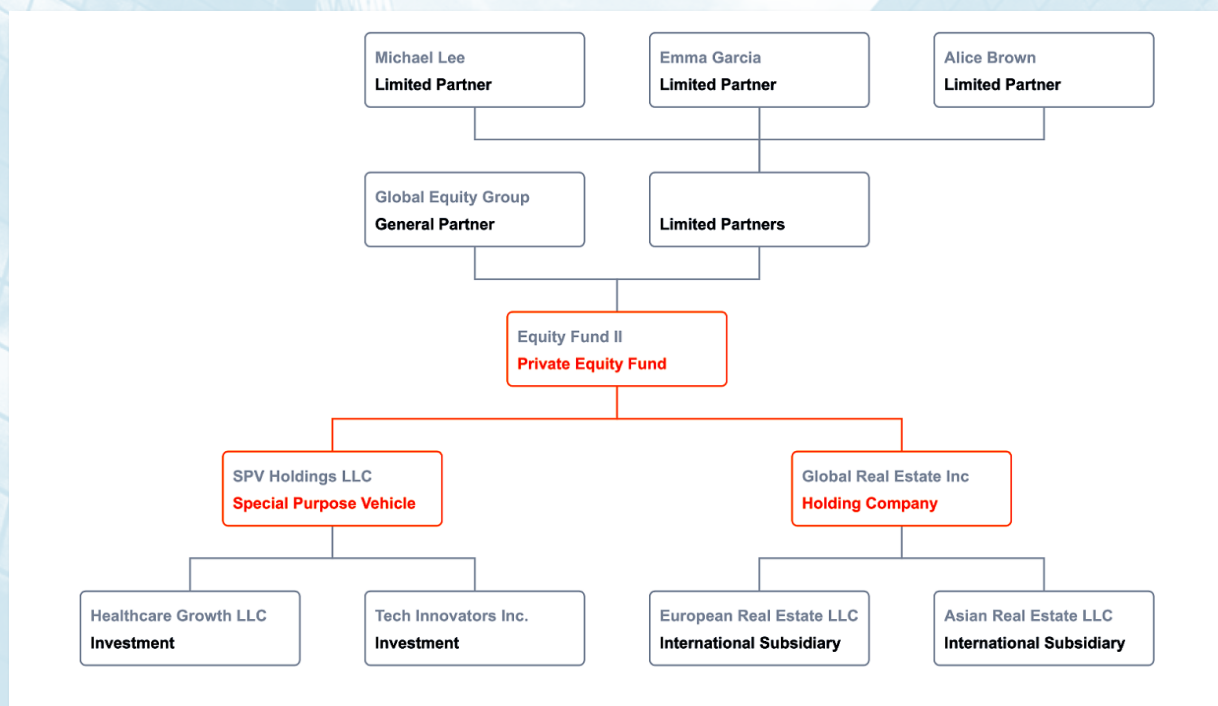


**Use Case Context: Multi-Region ESG Data Aggregation with Layered Ownership**

This chart includes:

- **SPV Holdings LLC** (tech/healthcare)
- **Global Real Estate Inc.** (owning both **European** and **Asian Real Estate LLCs**)

This reflects **FictionalCo's most common ESG data aggregation challenge**: ownership of real estate assets across multiple **jurisdictions** via **intermediate entities**, all funneled to a **Luxembourg-based GP**.

**ESG Challenge**

- Data silos at multiple levels: SPVs may not have direct oversight of meter readings or building systems.

- **Asian Real Estate LLC** may operate under completely different utility portals (e.g., TEPCO in Japan, or China Southern Grid), with **non-standard invoice formats**.

- **European Real Estate LLC** faces evolving CSRD reporting obligations (e.g., double materiality), while Asian entities follow **local voluntary frameworks** (e.g., Singapore ESG guidelines).

**GreenTally's Role**

- Acts as **the connective tissue** between holding company (Global Real Estate Inc.), regional subsidiaries, and local building operators.

- Deploys **smart connectors** to integrate with BMS/EMS and utility APIs (e.g., Schneider Electric for Europe; smart grid APIs in Singapore).

- Conducts **automated unit translation** (e.g., kWh to MJ, ¥ to €), and aligns with **region-specific emissions factors** using localized GHG Protocol references.

- **Normalizes** reporting to match EU SFDR Article 8/9 for the GP, even if local data collection methods differ.

**Output Example**

- Regional scorecards showing:
  - % Taxonomy-aligned real estate assets
  - Cross-border Scope 3 estimates for supply chain emissions (construction, HVAC)
  - Asian assets flagged for low energy disclosure, with suggestions for proxy data

**Role-Based Access**

- SPV and holding company execs get **roll-up views** by region.

- ESG lead at the GP sees consolidated reporting across the entire **Equity Fund II** structure.

- Each property team only sees the input layer relevant to their asset.

**Greentally**

**Summary for Slide Use or Handout:**

| Chart | Region | Structure | ESG Use Case | GreenTally Support |
|---|---|---|---|---|
| Picture 1 | Europe | Direct fund-to-asset | Fragmented utility data, local taxonomies, EPC-based emissions | OCR-based ingestion, EU Taxonomy logic, Article 8/9 templates |
| Picture 2 | Europe & Asia | SPV + Holding Co + Subsidiaries | Global energy mix, multiple languages, varied ESG rules | API integrations, multilingual support, regional emissions factors, consolidated dashboards |

**Jurisdictional and Regulatory Complexity**

FictionalCo's European GP structure must harmonize ESG metrics across jurisdictions with **divergent rules and utilities**. The EU requires detailed reporting under SFDR and the Taxonomy – e.g. classifying activities as climate-mitigation or not. In practice, a German office building might use one energy accounting scheme, while a French logistics park reports under different conventions, and an Asian asset follows yet another. Utility data comes in varied units and languages, making normalization hard.

- **EU/CSRD/SFDR/EU Taxonomy:** The EU's framework sets stringent standards. Real-estate activities must be assessed against taxonomy criteria (energy intensity, renovation rates, etc.). SFDR requires fund-level disclosures, forcing GP accounting to aggregate data into Article 8/9 compliance templates.
- **Asia-Pacific:** ESG reporting requirements are evolving rapidly (e.g. Japan's carbon accounting guidelines, Singapore's TCFD-like rules, China's data-volumes scrutiny). Local grid emissions factors and reporting formats vary widely, and often no central utility data portal exists.
- **United States:** New SEC climate disclosure rules and state-level green building mandates mean additional, different reports. U.S. electricity mix, regulatory requirements, and GAAP accounting introduce further data translation steps.

These **multi-currency, multi-regulator** demands create a huge consolidation burden. For example, new EU measures like the Carbon Border Adjustment Mechanism (CBAM) will impose carbon taxes on imports, pushing even foreign supply chains (e.g. construction materials) to align with EU carbon accounting. In sum, FictionalCo's GP needs a unified solution to translate all local utility bills, accounting entries, and ESG metrics into consistent, audit-ready reports.

**Greentally**

**GreenTally.ai Operational Workflow**

**End-to-End Data Management:** GreenTally becomes the GP's designated ESG **middle office**, interfacing with all field partners. Our process includes:

- **Local coordination:** We assign an ESG data liaison for each asset and region. These liaisons train and manage *managing agents* and facility teams to gather required data on schedule. Automated reminders and follow-ups ensure timely collection. (In one case study, automated workflows cut a 6-month data gathering cycle to just 2 months.)

- **Automated collection:** Utility vendors (gas, electricity, water) are contacted directly via email or portal APIs. GreenTally's system automatically pulls invoices and meter readings each period.

- **AI-driven data cleaning:** Ingested documents (PDF bills, spreadsheets) are parsed by machine learning OCR to extract consumption and spend details. Our algorithms classify line items to proper accounts and flag anomalies (e.g. duplicate bills or outlier usage). This eliminates manual entry errors – for example, one fund saw significant error reduction when shifting to automated ESG data capture.

- **Integration with building systems:** Where available, we connect to building management systems (BMS/EMS) and IoT sensors using standard protocols (BACnet, Modbus, etc.) or vendor APIs. Real-time submeter data flows into our pipeline. At the same time, we integrate with accounting/ERP systems (e.g. SAP, Oracle, Yardi) to reconcile vendor payments and leases.

- **Permissioned access:** GreenTally's platform enforces strict role-based security. The GP CFO and ESG director see only portfolio-level aggregates; fund managers see KPIs per fund; and property managers or auditors see only their site's data. All sensitive data is encrypted in transit and at rest, meeting enterprise security standards.

Throughout, GreenTally acts as the single point-of-contact. Managing agents interact with our liaison rather than multiple GP contacts, streamlining communication. We provide "white-glove" support, tracking progress and offering translations as needed, which vastly reduces the GP's operational burden.

**Data Integration and Processing**

GreenTally's back-end collects **diverse data streams into a unified pipeline**. Using cloud-based data lakes and warehouses, we ingest raw inputs and transform them into standardized formats. Key features include:

- **ETL and Normalization:** Raw data (kWh, kWpeak, invoices) is timestamp-aligned and mapped to a consistent schema. We apply location- and fuel-specific emissions factors for each region. Custom connectors (APIs and secure FTP) pull data from legacy tools, reducing duplicate entries.

- **Metadata tagging:** Every record is tagged with asset identifiers, vendor names, cost centers, and activity codes (e.g. "on-site combustion" vs "purchased electricity"). This feeds into automated Scope 1–3 GHG categorization.

- **Rule-based compliance logic:** A compliance engine encodes SFDR and EU Taxonomy criteria. For example, the system flags assets as Taxonomy-aligned if they meet the delegated act's energy-use thresholds. This logic runs programmatically so that all activities in the data pipeline are tagged appropriately for reporting.

- **Role-based API layer:** We provide a secure API interface for FictionalCo's existing systems. Data exports can flow directly into CBRE's ESG reporting tools or financial systems. The integration is plug-and-play – no major IT overhaul required.

Throughout processing, we maintain full audit trails. Every data edit is logged, ensuring that final emissions figures are traceable to original documents. Our platform is cloud-scalable, so as the portfolio grows, processing capacity grows seamlessly.

**Outputs and Deliverables**

GreenTally produces **ready-to-use ESG reports** aligned with FictionalCo's needs:

- **Scope 1–3 GHG Accounting:** We deliver granular emissions by asset and in aggregate. Scope 1 (fuel combustion), Scope 2 (purchased electricity), and Scope 3 (upstream energy, tenant emissions proxies) are calculated per the GHG Protocol. All results are audit-ready and drill down to fuel and meter level for verification. Automated charts and dashboards visualize trends. This fully satisfies CSRD/TCFD requirements and aids CDP or GRESB reporting.

- **SFDR/EU Taxonomy Reports:** Data are formatted into SFDR compliance templates. We compute principal adverse impact (PAI) metrics and EU Taxonomy alignment for each property and fund. The system can flag each activity's eligibility and alignment

percentage per Taxonomy *Environmental Objective 1 (Climate Mitigation)* using our rules engine. This output can be delivered as a ready report or pushed via API into FictionalCo's reporting platform.

- **Utility and Energy Details:** Customized reports show consumption and costs by utility and by asset, supporting EU Energy Efficiency Directive (EED) audits and local requirements. We can generate multilingual bill summaries per jurisdiction.

- **Data Exports:** All cleaned data is exportable in formats compatible with common ESG software. Whether FictionalCo uses GRESB, Measurabl, or internal tools, we provide CSV/Excel/API feeds ready for upload. No extra data reformatting is required on the client side.

- **Executive Dashboards:** We create executive-ready dashboards (green building metrics, carbon trajectory, compliance status) for ESG officers and C-suite. These highlight portfolio gaps (e.g. assets lacking data) so action plans can be made.

By automating the heavy lifting, GreenTally ensures FictionalCo gets **investment-grade data**: complete, consistent, and verified. In practice, clients find their annual ESG reporting becomes a matter of hours rather than weeks or months.

**Technical Architecture**

- **Central Data Lake:** All ingested data is stored in a secure cloud data lake (AWS/Azure). Raw files and intermediate tables reside here, with a data warehouse layer for analytics. The unified storage layer is designed for high-availability and audit logging. *"ESG data platforms manage diverse data sources into a data pipeline and a single data storage"*, exactly as GreenTally implements.

- **ETL Pipelines:** We run containerized ETL jobs that clean, normalize, and aggregate data nightly. AI modules parse unstructured invoices; validation rules correct anomalies. Stream processing handles live sensor feeds.

- **API Integrations:** GreenTally connects to standard BMS/EMS vendors (e.g. Johnson Controls, Schneider Electric), utility smart-meter portals, and accounting/ERP APIs. Pre-built connectors (using industry standards like RealEstateCore where available) mean rapid deployment. Data flows are two-way, so meter readings and meter service orders can be updated automatically if needed. As industry guidance notes, an ESG

solution *"should offer API integrations with existing systems… to ensure real-time data synchronization and eliminate duplicate work"*.

- **Permissions and Security:** Access control is enforced at the API and UI layer. We use OAuth 2.0 with fine-grained roles: e.g. "Portfolio Analyst" can view all data, while "Property Manager" sees only their buildings. All data is encrypted at rest and in transit (HTTPS/TLS). Regular penetration testing and GDPR compliance reviews are built-in. Encryption keys and audit logs ensure only authorized users (per role) access sensitive ESG data.

- **Compliance Logic Engine:** A rules engine continuously evaluates each asset against regulatory criteria. For example, it checks if a building's energy intensity meets the Taxonomy's primary energy demand threshold. The logic is traceable and upgradeable as EU delegated acts evolve. Thus, mapping to SFDR/Taxonomy is programmatic rather than manual.

- **Scalability:** Microservices and Kubernetes ensure that adding new assets or funds scales out compute. The multi-tenant design means each FictionalCo fund gets a dedicated data namespace, but global analytics (e.g. GP-level reports) can aggregate all funds seamlessly.

**Stakeholder Integration Map**

**Why Action Is Urgent**

FictionalCo's success depends on proactive ESG management. Key reasons to deploy GreenTally now include:

- **Investor Expectations:** Institutional investors are increasingly filtering deals based on ESG. Many LPs now require fund managers to supply high-quality, verifiable ESG data. Failing to deliver can jeopardize fundraising. Conversely, properties with strong ESG credentials command real financial premiums (CBRE finds green-certified buildings rent for ~6% more and sell for ~15% higher prices). Acting now positions FictionalCo competitively in capital markets.

- **Regulatory Risk:** The compliance bar is rising sharply. In Europe, SFDR/CSRD deadlines are imminent and comingled EU Taxonomy rules are in force. U.S. SEC climate rules and Asia-Pacific reporting mandates add layers of risk. Non-compliance could expose FictionalCo to fines or loss of "Article 8/9" fund status. In contrast, GreenTally automates report generation, greatly reducing the risk of late or inaccurate filings.

- **Cost Efficiency:** Manual ESG reporting is expensive. By automating data collection and using AI for processing, GreenTally cuts reporting effort by ~90%. Clients often recoup implementation costs within a year through saved consultant fees and staff time. Moreover, identifying energy waste and optimizing operations (enabled by full data coverage) delivers tangible utility savings.

- **Technology Compatibility:** GreenTally's open-API, cloud-native platform integrates smoothly with FictionalCo's existing tools (accounting, property management, and ESG). There's no need to rip and replace systems – our connectors "sit on top" and feed data downstream. We align with standards (e.g. supporting common frameworks like GRI, SASB, TCFD, CSRD) so outputs plug into any current workflow.

In summary, delaying action leaves FictionalCo exposed to investor pressure, fines, and inefficiency. Adopting GreenTally now ensures FictionalCo stays ahead of ESG obligations and market expectations, while reducing costs and leveraging technology already in place.

**Pilot Program Recommendation**

We recommend launching a *cross-border pilot* to demonstrate value. For example, select one European and one Asia-Pacific property (with different utility systems and regulations) under a single fund. Implement the GreenTally process end-to-end: collect 6–12 months of data,

generate consolidated reports, and measure the improvements. We would quantify time saved, data coverage achieved, and the accuracy of emissions accounting against historical estimates. This pilot will *prove out* the model and build stakeholder confidence before scaling to the full portfolio.

---

At **GreenTally.ai**, our mission is to empower companies like yours to take the first step with confidence.

✉ **Contact us at [Ning@greentally.ai](mailto:Ning@greentally.ai) / [Albin@greentally.ai](mailto:Albin@greentally.ai)**

**Let's explore what ESG can really mean for your bottom line.**