

FICHE 01 / 10

Scope 3: Turning Consumer Behavior into Climate Proof

Why the hardest emissions to measure may be the easiest to verify -- if companies capture behavior where it actually happens.

#Scope3 · #ESG · #BehavioralESGData · #CircularEconomy · #FMCG

KEY INSIGHTS

1.

Scope 3 measurement challenges are driven largely by data availability and infrastructure, rather than by fundamental gaps in carbon accounting methods.

2.

Distribution networks already contain much of the operational infrastructure needed to capture behavioral ESG data at scale.

3.

Verified behavioral events can turn estimated Scope 3 disclosures into evidence-based, audit-ready reporting.

WHAT SCOPE 3 REALLY MEANS

70-90%

Share of FMCG emissions that are Scope 3

<5%

Estimated share based on verified behavioral data

\$30T+

Capital tied to climate disclosure

Most companies think Scope 3 emissions are difficult to measure. In reality, the challenge is not carbon accounting. It is the absence of field-level behavioral data.

Scope 3 emissions are all indirect emissions in a company's value chain, upstream and downstream, that it does not directly control. For most FMCG companies, they represent **70-90% of total carbon footprint**.^[1] Packaging disposal, consumer use patterns, and post-sale behavior sit squarely in this category.

Yet these emissions are almost universally estimated. Companies apply generic emission factors to spend data, or extrapolate from industry averages. The result is a number that satisfies a reporting template but carries no real

accountability.^[2]

WHY COMPANIES STRUGGLE TO MEASURE IT

Scope 3 accounting frameworks are already well established. GHG Protocol, IFRS S2, and CDP provide detailed methodological guidance.^[2] The real challenge is not the calculation itself, but the availability of reliable data across complex value chains. The bottleneck is operational: capturing verified information from suppliers, distributors, retailers, and consumers at the point of action.

Methodological questions do remain -- emission factor selection, category boundary definitions, and double-counting risks -- but these become manageable once reliable activity data exists. Without that data, the most sophisticated accounting model still produces an estimate.

Traditional approaches rely on **surveys, audits, or spend-based proxies**, including invoice volumes, average coefficients, and generic emission factors. According to S&P Global, Scope 3 data suffers from the extreme complexity of global value chains, making it time-consuming to calculate and prone to inaccuracy.^[4] 68% of companies experience audit delays due to Scope 3 data gaps.^[5]

INTRODUCING: BEHAVIORAL ESG DATA

Most ESG metrics are derived from financial flows: spend data, invoice volumes, energy bills. They approximate environmental impact through economic proxies.

Behavioral ESG Data is different. It is sustainability data derived directly from verified real-world actions, not from economic activity used as a proxy. In other words, sustainability measured like logistics -- through verified operational events.

Sustainability impact is not only a matter of volume but of sustained behavior change: the same action, repeated in context, until it becomes automatic.^[10]

CONCEPT

Behavioral ESG Data

Sustainability metrics derived from verified real-world actions rather than estimated economic activity. Each data point corresponds to a specific actor, location, timestamp, and physical event, making it traceable, auditable, and regulation-ready.

Examples include:

- Packaging return or sorting events at retail level
- Refill actions at activated consumer touchpoints
- Verified recycling handovers by field agents
- Medical device returns at pharmacy dispensing points

Feature	Traditional Scope 3 Data	Behavioral ESG Data
Source	Spend-based proxies & averages	Verified real-world actions
Verification	Generic emission factors	Photo + Geo-tag + Timestamp
Auditability	Low -- estimated	High -- regulation-ready
Speed	Slow -- annual audits	Real-time -- weekly routes

THE DISTRIBUTION NETWORK ADVANTAGE

Large consumer goods companies already operate dense field networks: sales representatives, distributors, and retail partners visiting thousands of stores daily to manage inventory, merchandising, and compliance.^[6]

From a systems perspective, this network is not only a logistics layer. **It is a distributed observation system capable of capturing real-world behavioral data.** When simple verification tools are embedded into existing visit routines, the same network becomes a scalable infrastructure for measuring packaging return, refill adoption, and post-consumer handling.^[7]

The infrastructure for Scope 3 measurement already exists. It simply needs activation.

Every routine field visit becomes a potential observation point for how products are actually used, returned, or recovered.

"Distribution infrastructure is not just a logistics asset. It is an untapped ESG data network."

SYSTEM INSIGHT

Distribution networks are not only logistics systems. They are large-scale observation networks embedded in everyday operations.

Every retail visit, pharmacy delivery, or distributor route creates an opportunity to observe what happens to products after sale -- whether packaging is returned, devices are recovered, or materials are sorted. These actors see what happens in the last mile. Satellites and sensors do not.

When verification tools are embedded into these routines, the same network becomes a scalable infrastructure for sustainability data -- covering Scope 3 end-of-life, EPR compliance, and circular economy flows simultaneously.

One of the largest potential sustainability data networks already exists: the distribution system.

 COST ADVANTAGE	Activation runs on existing payroll and pre-funded routes. No new headcount, no sensor network, no dedicated audit program. The marginal cost per verified data point is a fraction of what third-party audits or IoT infrastructure would require, and the network scales with your distribution, not your ESG budget.
 DOUBLE ROI	This data does two jobs simultaneously. It satisfies regulators and investors demanding higher-quality Scope 3 disclosure. And it gives brands real-time visibility into secondary markets, retailer compliance, and post-consumer packaging flows: intelligence that existing sales systems have never captured.

WHAT VERIFIED ACTIONS LOOK LIKE

A verified behavioral event is a timestamped, geo-validated, photo-confirmed action linked to a specific actor at a specific location. The verification layer runs three automatic checks: duplicate detection (same location, same actor, same time window), geo-boundary validation (GPS coordinates must fall within the registered outlet's territory), and image integrity checks. The result is a tamper-resistant audit trail.

This approach does not replace mass-balance accounting or waste contractor records. It adds a high-frequency, field-level behavioral layer that triangulates with existing inventory and logistics data, strengthening the overall Scope 3 evidence base without displacing existing systems.

- A retailer sorting post-consumer PET at point of collection: photographed, geo-tagged, recorded
- A sales rep confirming packaging segregation at a shop during a routine route visit
- A consumer completing a refill action at an activated retail point, tracked via QR or agent confirmation
- A device return (inhaler, insulin pen) logged at pharmacy level with full verification chain

■ FIELD SCENARIO

A beverage sales rep visits 30 small shops on a weekly route. At each stop, the retailer hands over sorted PET bottles from consumers. The rep logs the handover with a photo and location stamp: under 20 seconds.

A pharmaceutical rep visits 30 pharmacies in a rural zone. At each stop, the pharmacist hands over used inhalers collected from patients. The rep scans the batch: photo + barcode + location. Done in seconds.

Multiply this scenario across a national sales network. Each month: tens of thousands of verified behavioral data points. The shift is from 'we believe X bottles were sorted' to 'here are 23,400 bottles sorted this month, certified by barcode.'

One visit. One photo. One data point. Multiplied across an entire distribution network.

FROM EVENTS TO ESG PROOF

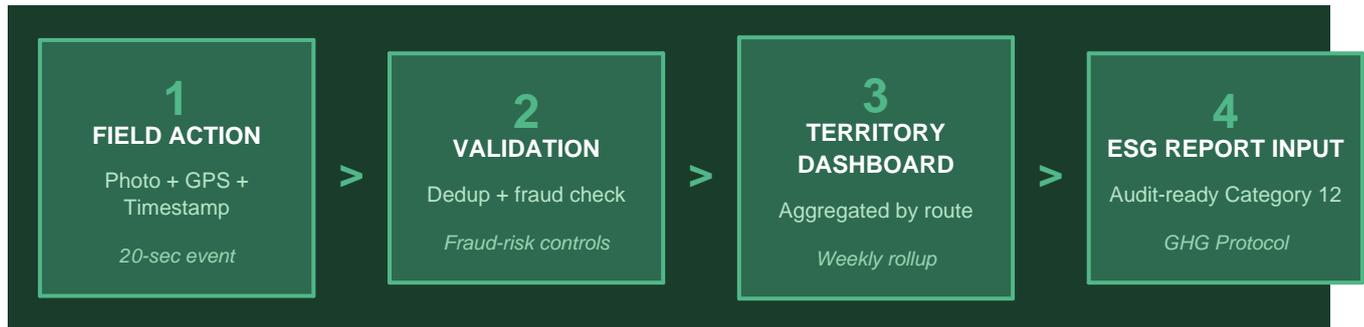
Behavioral ESG Data is designed as a **verification layer**, not a full replacement for Scope 3 accounting. It does not address all material Scope 3 categories -- its primary application is Category 12 (end-of-life treatment of sold products), where field-level behavioral data is most material and most absent. For Categories 1, 4, and 11, spend-based and activity-based models remain appropriate. The value of behavioral data is in making Category 12 disclosures defensible, auditable, and regulation-ready.^[2]

Verified behavioral events feed directly into three reporting frameworks: **GHG Protocol (Scope 3 Category 12)**^[2] for end-of-life treatment, **CDP supply chain disclosures**^[7], and **EPR compliance reporting** under national and EU regulations.

Regulators are moving from estimation to verification. IFRS S1/S2 and the EU's ESRS standards now explicitly require that Scope 3 emissions be measured and explained, not simply estimated. The direction of travel is clear: regulators are moving from modeled emissions toward evidence-based reporting. Companies that build verified behavioral data infrastructure now are not catching up to regulation. They are ahead of it.^[8]

The primary output is a verified count of behaviors with a full provenance chain -- each photo-timestamped data point supports the recycled or recovered quantity in your ESG disclosure. Emission factors are still applied to convert these counts into tCO₂e, but the underlying activity data is verified rather than estimated. Instead of completing arithmetic models, you consolidate real evidence.

FROM FIELD EVENT TO ESG DISCLOSURE



FIELD INSIGHT

**Most companies think the challenge of Scope 3 is measurement.
In reality, the challenge is activation.**

Data appears only when behavior changes.

INTEGRATION AND GOVERNANCE

Behavioral ESG Data is designed to integrate with existing field operations infrastructure, not replace it. The platform connects to SFA and route management systems (Salesforce, SAP, in-house DMS) via standard API. Verified events are exported in formats compatible with leading carbon accounting platforms and map directly to GHG Protocol Category 12 emission factors.

Governance follows a three-layer model: field agents capture and submit; territory managers review and approve; ESG teams receive aggregated, audit-ready reports with full data lineage. External assurance providers can access the full evidence trail, including raw photos, GPS logs, and verification metadata.

The methodology is owned and documented by Play for Earth. It is version-controlled, independently reviewable, and designed to meet ISAE 3000 assurance standards.

THE NEXT FRONTIER

As regulators tighten ESG disclosure requirements and investors demand audit-ready climate data, companies will need to move beyond estimation models.^[9]

The next generation of sustainability reporting will rely increasingly on **verified behavioral signals collected at the point of action**. Organizations that activate this infrastructure early will not only improve their climate credibility. They will also gain operational visibility into how their products move through real-world circular systems.

Companies that treat their distribution network as an ESG data asset may gain an operational advantage that becomes difficult to replicate once the data infrastructure is established.

KEY TAKEAWAYS

CORE INSIGHTS	RECOMMENDATIONS FOR ORGANIZATIONS	QUESTIONS TO ASK YOURSELF
<ul style="list-style-type: none"> ✓ Behavioral ESG Data -- verified field events rather than economic proxies -- is an emerging approach to improving Scope 3 credibility ✓ Existing distribution networks are already the infrastructure for Scope 3 measurement; they just haven't been activated ✓ Organizations that build verified behavioral data infrastructure early gain a durable advantage in ESG audit and investor scrutiny 	<ul style="list-style-type: none"> → Map your field network before buying new measurement tools -- the infrastructure likely already exists → Prioritize Scope 3 Category 12 (end-of-life) as the most measurable and highest-impact category → Embed verification logic into existing field agent visit workflows -- not as a separate program 	<ul style="list-style-type: none"> ? <i>What percentage of your Scope 3 data is verified versus estimated today?</i> ? <i>Do your field agents currently collect any behavioral data during retail visits?</i> ? <i>Which investor or regulator is most likely to challenge your Scope 3 disclosure in the next 12 months?</i>

AUTHOR NOTE

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Clément Chabot is the founder of Play for Earth, a platform designing behavioral infrastructure for circular economy and health systems. His work focuses on operational models that convert real-world actions into verifiable sustainability data -- activating existing distribution, retail, and healthcare networks as measurement infrastructure.

This insight series explores how existing distribution, retail, and healthcare networks can become data infrastructure for climate reporting, EPR compliance, and circular economy outcomes.

ABOUT THE PLAY FOR EARTH INSIGHT SERIES

The Play for Earth Insight Series explores operational approaches to sustainability systems in real-world environments, particularly in emerging markets. Each fiche examines how behavioral infrastructure, distribution networks, and field verification can transform circular economy outcomes, climate reporting, and health system sustainability.

The series is intended for sustainability leaders, policymakers, investors, and practitioners working at the intersection of climate, circular economy, and healthcare systems.

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Statistical data cited in this fiche are drawn from publicly available sources and recognised sector reports. Play for Earth cannot be held responsible for any subsequent changes to these figures.

ABBREVIATIONS

CDP	Carbon Disclosure Project	GPS	Global Positioning System
DMS	Distribution Management System	GTI	Green Transformation Index (Play for Earth)
EPR	Extended Producer Responsibility	IFRS	International Financial Reporting Standards
ESG	Environmental, Social, and Governance	ISAE	International Standard on Assurance Engagements
ESRS	European Sustainability Reporting Standards	PET	Polyethylene Terephthalate (common plastic packaging)
FMCG	Fast-Moving Consumer Goods	PRO	Producer Responsibility Organisation
GHG	Greenhouse Gas	SFA	Sales Force Automation

SUGGESTED CITATION

Chabot, C. (2026). *Scope 3: Turning Consumer Behavior into Climate Proof*. *Play for Earth Insight Series, Fiche 01/10*. Play for Earth. playforearth.org

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