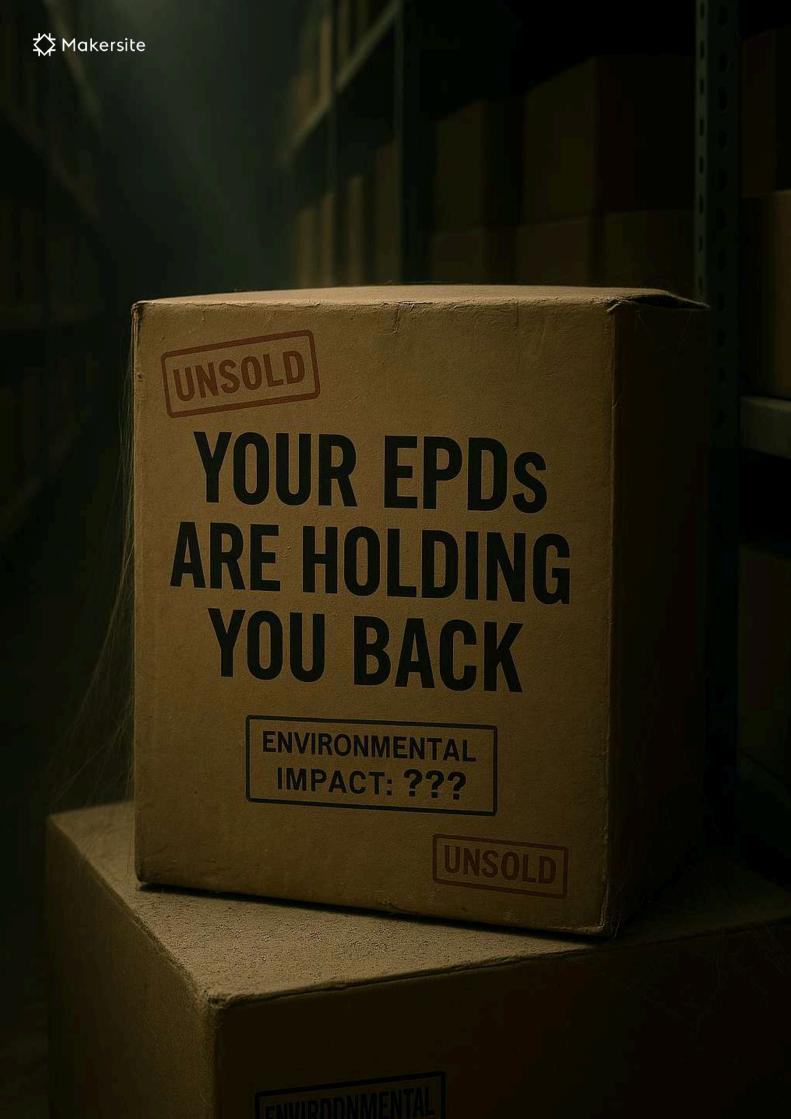




Contents

Chapter	Title	Page
Intro	Your EPDs are holding you back	03
01	Why LCA consultants, manual data, and product-family EPDs fail your business	07
02	The blind spots, bottlenecks, and business risks of the traditional EPD approach	11
03	Making sustainability sell: EPDs beyond the static report	14
04	The smarter approach: Automated, verified, product-level EPDs	17
05	Why EPDs at Scale (powered by AI) matters	20
06	What EPDs at Scale looks like in practice	22
07	The way ahead: Data, AI, and scalable, verifiable sustainability	24





Has selling products ever been this difficult?

Complex regulations like the Construction Products Regulation (CPR). Global supply chain disruptions. Intense competition on cost and performance. And now, a rapidly growing demand for provable sustainability has become a purchase metric. Trying to win business, especially in sectors like building and construction, feels tougher than ever.

Customers, regulators, and investors aren't just asking about environmental impact anymore; they're demanding verifiable proof at the product level. Once optional differentiators, Environmental Product Declarations (EPDs) are quickly becoming table stakes – essential prerequisites for tenders, market access, and stakeholder trust. As this necessity grows, the standards are also tightening, significantly reducing the effectiveness of loweffort or generic reporting measures.

But here's the Gordian knot: While EPDs are becoming crucial for sales, differentiation, and internal understanding of impacts on a granular level, the way most companies create them is fundamentally broken. It's slow, expensive, relies on averages, and operates entirely disconnected from the speed and scale your business needs to compete.

The buildings and construction sector is by far the largest emitter of greenhouse gases, accounting for a staggering 37% of global emissions¹.

63% of engineers and contractors report that most or all of their clients ask for EPDs².

Over **85%** of manufacturers cite customer demand as the motivation to provide EPDs³.



This traditional EPD strategy is broken

It doesn't work at business speed

And it has created three major problems:

You're losing deals and market access.

The traditional, months-long EPD process simply can't keep up. Tenders demanding specific, verified EPDs close before you can respond. Customers needing quick proof choose competitors who are ready. Regulations like CPR demand compliance you can't efficiently demonstrate across your portfolio. Your sales are directly bottlenecked.

Your products fail to stand out (or worse, raise red flags).

Sure, standout 'lighthouse' projects get their own specific EPDs to showcase success. But, are EPDs just a superficial marketing tool to obscure performance variations and hide laggards? Or are they a powerful engine for internal progress? Relying on averages prevents honest differentiation, but more importantly, it squanders the EPD's true potential as a granular data source for R&D, process optimization, and genuine collaboration between sustainability, engineering, and procurement. This "strategic blending" hinders real decarbonization and risks credibility when the demand for transparent, verifiable data inevitably intensifies.

· The cost and effort are unsustainable.

Manually creating unique, verified EPDs for every relevant product variation needed to truly compete is financially and logistically crippling with traditional methods. Scarce expert resources are tied up in repetitive low-value tasks (like data prep – 51% of the cost!), instead of driving innovation that could further boost sales.



But wait, there's hope

So, how do you turn the EPD requirement from a sales blocker into a competitive weapon? How do you provide the market with the proof it demands, at the speed and scale needed to win?

Thankfully, there's a better way: embracing the power of integrated data and expert AI to automate EPD creation and verification at scale, directly enabling your sales and product strategy.

In this ebook, we'll dissect why the traditional approach fails your business goals and explore the alternative – EPDs at Scale. By the end, you'll see how you can generate the accurate, verified, product-level EPDs needed to win more business, differentiate effectively, and build a truly sustainable competitive advantage.



Robert Spang

Board of directors - ECO

Chair of technical committee - Indata

EPD Expert - Makersite

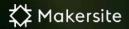


Sophie Kieselbach

Lecturer

Technical board - EPD International

Sustainability Expert - Makersite



Why LCA consultants, manual data, and product-family EPDs fail your business

ENVIRONMENTAL



Here's where traditional EPDs become a roadblock

Most companies approach EPDs tactically. A specific tender requires one, so the scramble begins, tasking either an internal LCA team—often already stretched by rising demand—or necessitating the engagement of an external LCA consultant. Data is manually gathered from disparate systems (PLM, ERP, supplier spreadsheets). The consultant builds the LCA model, often relying heavily on generic secondary databases (Ecoinvent, GaBi/MLC, etc) because primary data is too hard to collect across the supply chain with such urgency. The resulting report goes through a lengthy verification process. Finally, months later and at considerable expense, an EPD emerges — often expensive, and frequently covering a 'product family' to save cost, thereby averaging away any competitive advantage your specific product might have.

Demand for EPDs has grown over **2,000%** since 2022¹.

60% report recent EPD costs between €5k-€15k, and 40% report €15k-€20k+².



This entire process fundamentally hinders the core purpose of EPDs

Providing the timely, transparent environmental information necessary for the market to genuinely choose, develop, and utilize more sustainable products in their projects? No:

 It's too slow: Need an EPD for a tender closing in 4 weeks? Forget it. The average manual process takes months.

Result: Lost bid.

 It's too expensive: Scaling this manually across a portfolio to proactively support sales is cost-prohibitive.

Result: Limited EPD coverage, missed opportunities.

 It creates bottlenecks: Scarce LCA experts and verifiers can't handle the exploding demand using manual methods.

Result: Delays impact sales cycles and product launches.

• It lacks specificity: Let's be candid. While cost efficiency is the usual justification, relying on family or industry averages is often a convenient way to mask performance variability—effectively averaging out the results from less efficient sites or older product versions. While this might seem pragmatic for external reporting, it fundamentally undermines the EPD's role as a tool for genuine improvement. True differentiation becomes impossible (you can't credibly claim superiority if it's blended), and critically, you lose the granular data needed to target actual design enhancements or process optimizations.

Result: A potential competitive edge is blunted and the EPD serves more to obscure than to drive tangible sustainability gains.



Imagine it from the business perspective

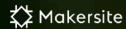
Let's take your sales team. A multi-million dollar project requires bidders to submit verified, product-specific EPDs for 30 key components within 5 weeks. Your competitor, using an automated system, submits their compliant bid with full documentation on time.

What happens next?

Panic. An urgent call to the sustainability team. A scramble to find available LCA consultants. Quotes come back estimating 8-12 weeks per EPD and a six-figure cost. The tender is unwinnable.

Or consider your R&D engineers. They've developed an innovative, lower-impact version of a core product using a new supplier. They need environmental impact data quickly to validate the design and support marketing claims. Waiting 3-6 months for a traditional EPD kills momentum and delays market entry. They might resort to estimations, risking inaccurate claims.

The traditional EPD process, focused on meticulous manual effort for individual reports, fundamentally clashes with the speed and scale of modern business and the urgency of the climate crisis. You're counting on outdated methods to meet future demands.



UNSOLD

The blind spots, bottlenecks, and business risks of the traditional EPD approach

ENVIRONMENTAL IMPACT: ???



The product family trap: Saving pennies, losing pounds

44% of manufacturers use sector- or industry-average EPDs¹.

Let's be honest. Product family EPDs exist largely because traditional methods make specific ones prohibitively slow and expensive – that's the official line. Grouping seems pragmatic for cost and effort.

But this 'efficiency' often serves a convenient secondary purpose: averaging away performance variations. While it might check a compliance box, it fundamentally undermines competitiveness and improvement potential. It prevents true differentiation based on your superior products, but just as critically, it allows underperforming sites or products to hide within the mean. This strategic blending sacrifices transparency for perceived simplicity.

Choosing product family EPDs isn't usually a strategic choice for leadership; it's a compromise forced by the limitations of manual, costly processes, trading potential revenue, market leadership, and genuine improvement potential for short-term savings and opacity. Single product EPDs, offering specific, verifiable environmental data, are far more valuable for positioning, differentiation, driving real progress, and winning deals – if they can be generated efficiently.



The verification gridlock: Where speed-to-market dies

"At the moment, you should expect a verification time of about 6 months" 1.

Even if you invest the significant time and money to create an EPD (whether family or specific) using traditional methods, you hit the next major roadblock: Verification.

The process typically involves submitting extensive documentation to a limited pool of qualified third-party verifiers. These experts manually review the LCA model, data inputs, and report against strict standards (like ISO 14025, EN 15804). This meticulous process, combined with rapidly increasing demand for EPDs across all industries, creates a massive bottleneck.





EPD data, integrated into business workflows

Sustainability teams need to empower engineering, sales, & procurement with verifiable EPD data, integrated into their workflows.

Winning in today's market requires a cohesive effort. Sustainability isn't just the responsibility of the sustainability department. It's embedded in the choices made every day by engineers designing products, procurement teams selecting suppliers, and sales teams communicating value to customers. EPDs should be a key data source informing these choices.

But the traditional EPD process silos this crucial information:

- Sales teams are blind-sided by tender requirements they can't meet or lack the specific, verified data to counter competitor claims.
- R&D/Engineering teams operate without rapid environmental feedback, slowing down sustainable innovation and making impact assessment a late-stage hurdle.
- Procurement teams struggle to compare the actual, verified environmental footprint of potential suppliers or components beyond basic cost and spec sheets.
- Marketing teams wait months for the data needed to launch credible green product campaigns, missing market windows.



57% of companies [have EPDs] for only part of their product portfolio

Expecting these teams to interpret complex, static LCA reports or wait months for an EPD is unrealistic, especially if it's watered down by averages. It creates friction, slows down the business, and keeps sustainability siloed.

To make sustainability a sales driver, EPD data needs to be democratized and integrated. It needs to be:

- Accessible: Where and when decisions are Timely: Available in days or hours, not made (CRM, PLM, ERP, procurement tools)
 - months.
- Relevant & Specific: Tied to the exact product configuration or component being discussed.
- Verifiable & Trusted: Backed by a transparent, robust process and credible validation.

Empowering the broader organization requires moving beyond the traditional one-off EPD creation process, whether it's outsourced to consultants or handled by internal teams often stretched thin by project-specific demands. It requires a platform approach that connects data, automates calculation, streamlines verification, and delivers insights where they're needed.

While overall responsibility for EPD accuracy rests with experts, making the data usable and scalable is key. You can't have an LCA expert validating every single component choice in realtime, but you can provide teams with pre-verified, product-level EPD data generated through a trusted, automated system. This empowers them to make faster, more sustainable decisions confidently.





Until recently, the tools and data infrastructure to truly scale EPDs didn't exist

+40% [of German manufacturers] already use their own tools and 10% use association tools¹.

51% experience difficulties in measuring and quantifying the environmental impact of their products².

You were forced to rely on manual methods and consultant expertise. Modernizing meant complex, expensive IT projects or service-based solution and software that rarely delivered.

But the convergence of AI, integrated data platforms, and cloud computing makes EPDs at scale not just possible, but essential for competitiveness. Platforms like Makersite are designed to overcome the traditional roadblocks preventing EPDs from being an effective business tool.



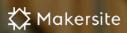
A smarter approach

What does this smarter, business-focused approach deliver?

- Deep data integration: Connects
 seamlessly with your core business
 systems (PLM, ERP, CAD, procurement)
 and supplier portals where product and
 supply chain data lives.
- 2. Al-powered data orchestration: Intelligently maps complex Bills of Materials (BoMs) to curated databases. Makersite's vast database ecosystem (>150 sources, including primary data options), accurately fills gaps and enriches a modeled supply chain using transparent, expert-based Al, ensuring the highest data quality.
- 3. Massively scalable calculation: Runs compliant LCA calculations simultaneously across thousands of product variations, reflecting specific configurations.

- 4. Accelerated verification: Leverages partnerships and digital workflows with leading verifiers (like Makersite's pioneering automated verification with IBU) to slash validation times.
- 5. Actionable output: Delivers verified, productspecific EPD data not just as PDFs, but as accessible data points via APIs or dashboards, ready for direct use by Sales (in CRM/tender tools), R&D (in PLM/CAD), and Marketing.
- 6. Backed by leading LCA/EPD expertise: Built by leading experts in the LCA/EPD space that ensure current needs are covered as well as a forward-looking understanding of what's to come and how quickly shifting requirements need to be reflected into a strategic solution.

This isn't about replacing LCA experts; it's about empowering them with tools that handle the repetitive heavy lifting, freeing them to focus on analysis, strategy, and complex cases. It's about making accurate, verified environmental data available at the speed and scale your business demands.





WHY EPDS AT SCALE (powered by AI) MATTERS

ENVIRONMENTAL IMPACT: SPECIFIC



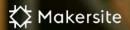
Unique attributes

78% of manufacturers see in 2024 a 5-10+% increase in annual revenue generated by sustainability measures¹.

- 01 Win more business, faster: Dramatically cuts EPD creation and verification time from months to minutes. Proactively equip sales teams with the verified proof needed to close deals. Turn EPDs from a blocker into a closing tool.
- 02 Differentiate with credible proof: Generate accurate, product-specific EPDs at scale, showcasing the true environmental performance of your innovations and superior sourcing choices.
- 03 Reduce costs & free up experts.: Massively lower the cost per EPD through automation. Reallocate valuable, scarce LCA experts from repetitive data tasks to strategic analysis, innovation support, and tackling complex sustainability challenges where their expertise truly adds value.

- 04 Ensure compliance & market access: Confidently meet current (CPR) and future (ESPR/DPP) regulatory requirements demanding specific, verifiable environmental data.
- O5 Drive smarter decarbonization: Base Scope 3 reporting, carbon reduction strategies, and supplier engagement on accurate, granular data across your entire portfolio and value chain.
- Of Embed sustainability into core processes: Integrate verified EPD data directly into CRM, PLM, ERP, and procurement systems. Make environmental impact a readily available data point for everyday decisionmaking in sales, design, and procurement, fostering a culture of sustainable operations.

54% of advanced manufacturers already use sustainability as a differentiator when positioning and marketing their products, compared with 31% of Novices².

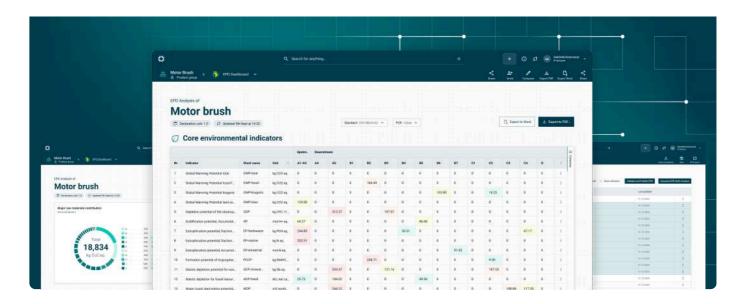




WHATEPDS AT SCALE LOOKS LIKE IN PRACTICE

ENVIRONMENTAL IMPACT: SPECIFIC





For the Sustainability team

Instead of drowning in spreadsheets and consultant emails, they manage the EPD process via the Makersite platform:

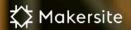
- Deliver specificity: Generate single-product, verified Type III EPDs across your entire portfolio, powered by granular LCA models and seamless data integration (PLM, ERP). Ditch misleading averages.
- Automate & accelerate: Leverage AI mapping and automated assessments for accurate, large-scale LCA/EPD creation. Benefit from instant, automated verification and bulk publishing via our partners, slashing time-to-market.
- **Scale affordably:** Achieve comprehensive coverage cost-effectively. Our pricing makes EPDs vastly cheaper at volume.
- **Drive strategic impact:** Use the vast EPD data output to build internal expertise, accelerate product decarbonization, inform R&D, and provide sales with winning, verifiable proof.

For the R&D team

Currently exploring a lighter-weight material for a component. Within their PLM or CAD interface, they select the new material option. An integrated Makersite plugin instantly calculates the projected change in environmental impact. They can rapidly compare options and make informed design choices, balancing compliance, cost, and sustainability in real-time.

For the Sales team

A notification pops up: "Verified EPD for Product Z-101 Rev C now available." They're preparing a major bid due next week. Instead of chasing the sustainability team, they access their CRM (e.g., Salesforce). Embedded within the product record is the link to the verified EPD, ready to be inserted directly into the tender response. They confidently submit the bid on time.





THE WAY AHEAD: DATA, AI, AND SCALABLE, VERIFIABLE SUSTAINABILITY

ENVIRONMENTAL IMPACT: SPECIFIC



We have entered a new era

It's a hard truth: the traditional EPD process, by forcing compromises or delivering specifics too slowly, actively hinders your ability to sell effectively and prevents you from using EPD data strategically to innovate and improve.

EPDs at scale, powered by platforms like Makersite, flips the script. It solves the core problems head-on, transforming EPDs from a bottleneck into a powerful sales enablement tool and a source of competitive advantage:

- · Makes winning bids with EPD requirements feasible and fast.
- Provides the specific, verifiable proof needed to differentiate your products.
- Slashes the cost and time involved, freeing up vital expert resources.
- · Ensures you can meet current and future regulatory demands confidently.
- Delivers accurate data for smarter decarbonization and enhanced brand value.
- Integrates sustainability seamlessly into your commercial and product workflows.

We've entered an era where integrated data and AI provide a concrete, practical way to meet sustainability demands without sacrificing business agility. It's about augmenting human expertise with powerful tools to achieve what was previously impossible: generating accurate, verified environmental proof at the speed and scale of modern commerce.

Now is the time for change. If you're ready to stop letting EPDs be a sales obstacle and start using them to win, to innovate, and to lead in your market, Makersite provides the platform and expertise to make it happen.

Explore Makersite EPDs at scale.

Visit www.makersite.com/