

— CLIENT CASE STUDY · LIFE CYCLE ASSESSMENT

From saying it's sustainable to proving it.

How a leading producer of sports and leisure infrastructure materials used an ISO 14040/44 Life Cycle Assessment to turn a biobased formulation into a measurable commercial advantage.

SPORTS & LEISURE INFRASTRUCTURE MATERIALS

>70%

reduction in cradle-to-gate
carbon footprint

85%

reduction in fossil
resource consumption

THE CLIENT

A leading producer and supplier of materials for sports and leisure infrastructure components.

THE CHALLENGE

Why the customer chose H2D

As customer expectations evolve, environmental performance is increasingly becoming a purchasing criterion alongside price, quality and technical performance.

Our customer recognised that sustainability claims must be supported by rigorous and transparent data. To ensure credibility and future readiness, the company partnered with H2D to undertake a detailed comparative Life Cycle Assessment of a standard fossil-based formulation against a biobased alternative.

WHAT H2D DELIVERED — AN ISO 14040/44-COMPLIANT STUDY

- Collection and validation of primary manufacturing data
 - Detailed supply-chain mapping
 - Integration of supplier-specific environmental information
- Advanced LCA modelling
 - Independent critical review by an external LCA specialist
 - Sensitivity analysis to assess the robustness of the conclusions

Rather than merely calculating carbon emissions, H2D helped its customer **identify the true drivers of environmental impact**, quantify the business value of raw material innovation, and establish a roadmap toward future EPD certification.

STANDARD	BOUNDARY	COMPARISON	ASSURANCE
ISO 14040 & ISO 14044	Cradle to gate	Fossil-based vs. biobased formulation	External critical review

THE RESULT

Turning sustainability into competitive advantage

For our customer, this was not simply about measuring environmental performance — it was about creating commercial value. The study demonstrated that the biobased solution achieves **in excess of a 70% reduction in cradle-to-gate carbon footprint** and an **85% reduction in fossil resource consumption** against the conventional formulation.

Biobased vs. conventional formulation

Indexed to the conventional formulation = 100. Cradle-to-gate boundary.

■ Conventional (fossil-based) ■ Biobased alternative

Cradle-to-gate carbon footprint



Fossil resource consumption



Five strategic advantages

01

Stronger positioning in tenders

Infrastructure owners, municipalities, architects and designers increasingly require environmental documentation when selecting construction materials. The LCA provides quantitative evidence where sustainability criteria influence supplier selection.

02

Preparation for future EPD certification

The ISO-compliant LCA forms the foundation for Environmental Product Declarations. Rather than starting from scratch, much of the work required to reach verified EPD publication is already captured.

03

Reduced exposure to carbon costs

Lower embedded carbon intensity becomes an increasingly important commercial advantage as carbon reporting obligations expand throughout value chains — and customers seek lower-carbon procurement portfolios.

04

Premium market differentiation

In markets where technical performance has become largely commoditised, verified sustainability performance replaces generic messaging with measurable, independently reviewed data.

05

Increased customer confidence

Many environmental marketing claims are met with scepticism. By investing in a transparent, ISO-compliant assessment, our customer demonstrates a commitment to evidence-based sustainability — and gives its own customers greater confidence in the claims they pass on.

BEYOND COMPLIANCE

Sustainability as a growth driver

The project demonstrates that sustainability should not be viewed as a compliance exercise. By partnering with H2D, our customer transformed environmental performance into a strategic business asset: the LCA quantified substantial improvements, identified the most effective levers for future reductions, prepared the company for EPD certification, and provided a robust platform for customer communication.

Most importantly, it enabled the company to move from *saying* that its biobased solution is more sustainable to *proving* it with independently reviewed scientific data. This is where sustainability stops being a cost and starts becoming a competitive advantage.

What the customer holds today

- ✓ Quantified evidence of the environmental benefits of their biobased solutions
- ✓ Credible sustainability data that can be shared with customers and project stakeholders
- ✓ A pathway toward independently verified EPDs
- ✓ Stronger positioning in sustainability-driven tenders
- ✓ Enhanced differentiation from competing solutions
- ✓ Reduced exposure to future carbon-related reporting and procurement requirements

From LCA study to long-term partnership

For H2D, this validated its approach: sustainability studies that are not simply technically correct, but directly usable as business development tools. What began as an environmental assessment became the foundation of an ongoing partnership — and our customer is now working with H2D on the next stage of its strategy.

What would this look like for your product?

H2D works alongside companies across the chemical value chain — specialty chemicals, industrial formulation, cosmetics, construction and automotive — turning sustainability goals into practical, profitable solutions. Talk to us about a comparative LCA for your own formulation.