SUSTAINABLE SCIENCE FOR THE WHOLE WORLD™

Speaker Intro

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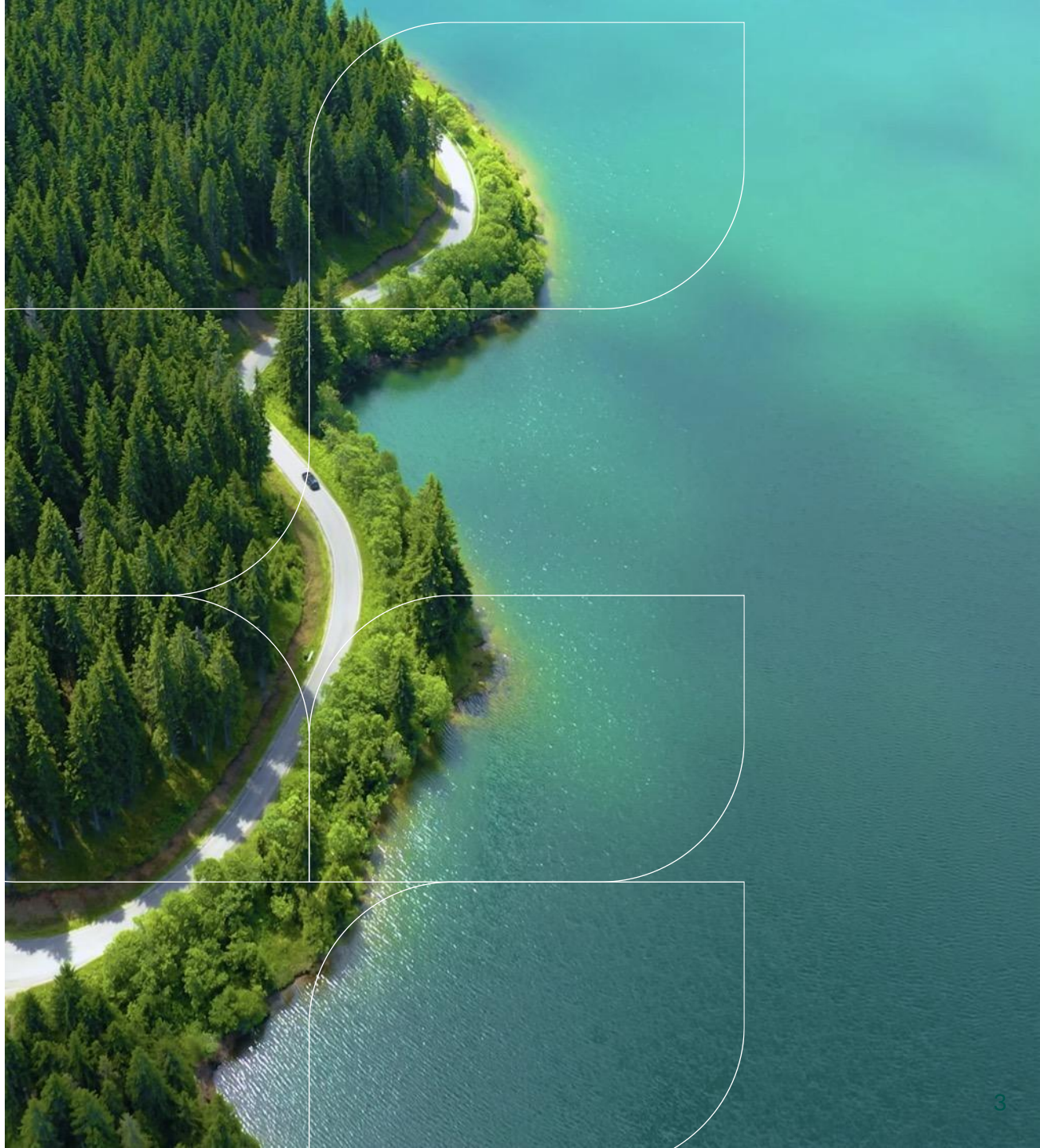
- *Who We Are*
- *Ecovadis Journey*
- *What are Customers Asking for?*
- *Finding Solutions*
- *From Claims to Proof*
- *Challenges*
- *What we Learned*



SUSTAINABILITY
SCALABILITY
PERFORMANCE

Founded in 2017, Integrity Bio-Chem (IBC) is redefining what's possible in chemistry. Backed by a team of industry experts, we create sustainable, renewable molecules that perform at the scale of traditional synthetics—without the environmental trade-offs.

Our patented biopolymers and bio-based surfactants power innovation across energy, mining, industrial, agriculture, and specialty markets—delivering high-performance solutions.

Service

30,000+ orders fulfilled with 100% order facilitation

Scale

1.3B+ lbs. of product manufactured and shipped since September 1, 2017

Sustainability

*Ranked EcoVadis Silver
*Bio-Based Products

Safety

IBC operations reported zero lost-time incidents since 2020

Walmart vs Whole Foods

Our CEO Jimmy Jett, often says, why are all these companies setting goals for net zero by 2030 and beyond- we want to be net zero tomorrow!

And we don’t want to be making boutique green chemistry – we want to make products that work, for reasonable prices, that can be used by the average Joe- that is how you truly make a difference.

SILVER | Top 15%
ecovadis
Sustainability Rating
MAY 2025

We Looked Good on Paper

Integrity BioChem's flagship biopolymers are sugar-based; they are derived from a naturally occurring, renewable source.

Our products are **manufactured with a zero-waste standard;** our raw materials are used, reused or recycled for other applications and products. We offer affordable solutions that can reduce carbon footprint through our best-in-class engineering.

These polysaccharide chemistries replace traditional products with **innovative, environmentally friendly solutions**. All our raw materials are strategically sourced locally or regionally based on our manufacturing locations, supporting local economies and ensuring a reliable supply chain

Our method of biopolymer synthesis and functionalization is superior to other multi-step processes, by eliminating unnecessary derivatives and by-products. Our new bio-based surfactants use a state-of-the-art production process that, unlike traditional fermentation, allows us to produce solutions to scale for higher volumes, at a lower cost and with a more consistent product quality.

What are customers asking for?

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In most industries' today consumers are demanding more sustainable ingredients in their products, but they aren't willing to sacrifice performance and want to remain cost competitive. This was common in every space we were in. **Customers are not aligned—and neither are their expectations.**

We had to start by standardizing expectations and working on cross-organizational alignment – and setting the right expectations with our customers

- Different industries prioritize different ESG metrics, and have a different sense of urgency
- Some focus on **performance**, others on **safety or environmental impact**
- Suppliers must translate one capability into multiple customer needs

We didn't start with a grand ESG strategy… we responded to customer asks—and that shaped everything.

- No formal ESG strategy
- Reactive response

This is how most supplier ESG journeys begin—not internally, but through customer-driven requirements

From Requests to Framework

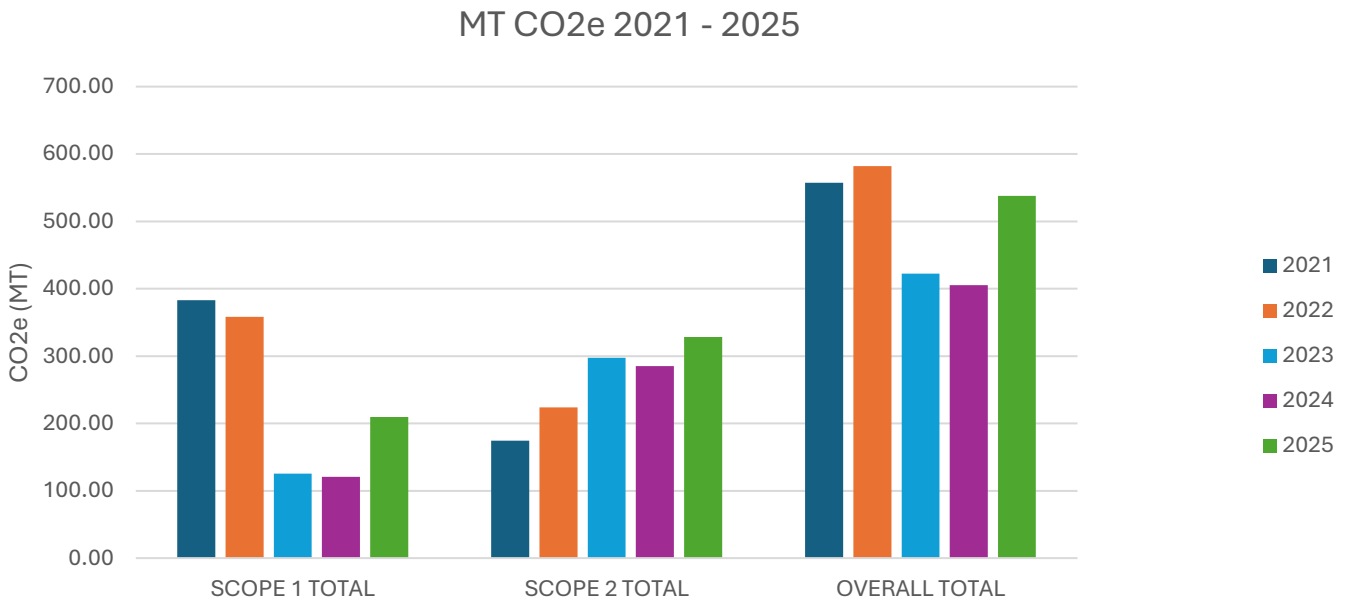
We realized what was missing from our repertoire was alignment

- Policies (water, waste, ethics)
  - Although our lab and operations teams had processes in place to keep the place running, we needed a better organizing system – and as we all know with Ecovadis sometimes you just need to write the obvious, unspoken things down
  - We also got certified for ISO 9001, which helped with documentation and organization
- Defined KPIs
  - We had to start setting KPIs for new things such as our Scope 1 and 2 emissions, as well as expanding our “social” and “governance” goals – which was not easy in a private, small company

Step 1: KPIs

Even before doing our first Ecovadis scorecard, we already started being asked about our Emissions… as a small company with a one woman team, this was an outsourced task.

However, we quickly learned the importance of KPI's and making sure that all goals were documented. We could set our own Carbon Intensity, but these numbers don't mean anything unless we are moving towards something attainable.



Backing up our Claims

2024 TOTAL WATER USAGE	**50,292 TONS**
TOTAL NON-HAZARDOUS WASTE:	**94 TONS**
WATER DISCARDED AS WASTE:	**0.18%**

2024 HAZARDOUS WASTE GENERATION:	**0 TONS**
HAZARDOUS WASTE TOTAL SINCE 2017:	**0 TONS**

In 2024 **we met our goal** of decreasing our emissions intensity, which decreased by 18% from 2023, and by 55.8% from our baseline year of 2021. **Our net total Scope 1 and 2 emissions also decreased from 422.19 to 405.44, a total of 4%.**

	2021	2022	2023	2024
Emissions/Revenue (MT CO2e/million $)	15.58	9.73	8.4	6.88

Total GWP Emissions for EdenSurf's Proprietary Base Component	0.60	kg CO2e/kg
Total GWP Emissions for EdenSurf 1200HA	1.05	kg CO2e/kg
GHG Emissions from Production	0.00	kg CO2e/kg

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INDUSTRY SPECIFIC EXPECTATIONS

Despite growing in our EcoVadis and documentation efforts, we started being pulled in different directions internally

These differences were often reflected directly in customer asks and supplier requirements—meaning suppliers are evaluated differently depending on where their products are used.

Understanding this has been critical to maintaining and growing customer relationships in each industry.

Energy = Performance

Mining = International Differences

Personal Care/HI&I = Human/Animal Concerns and Consumer Involvement

Ag/Paints & Coatings = Regulatory Hurdles

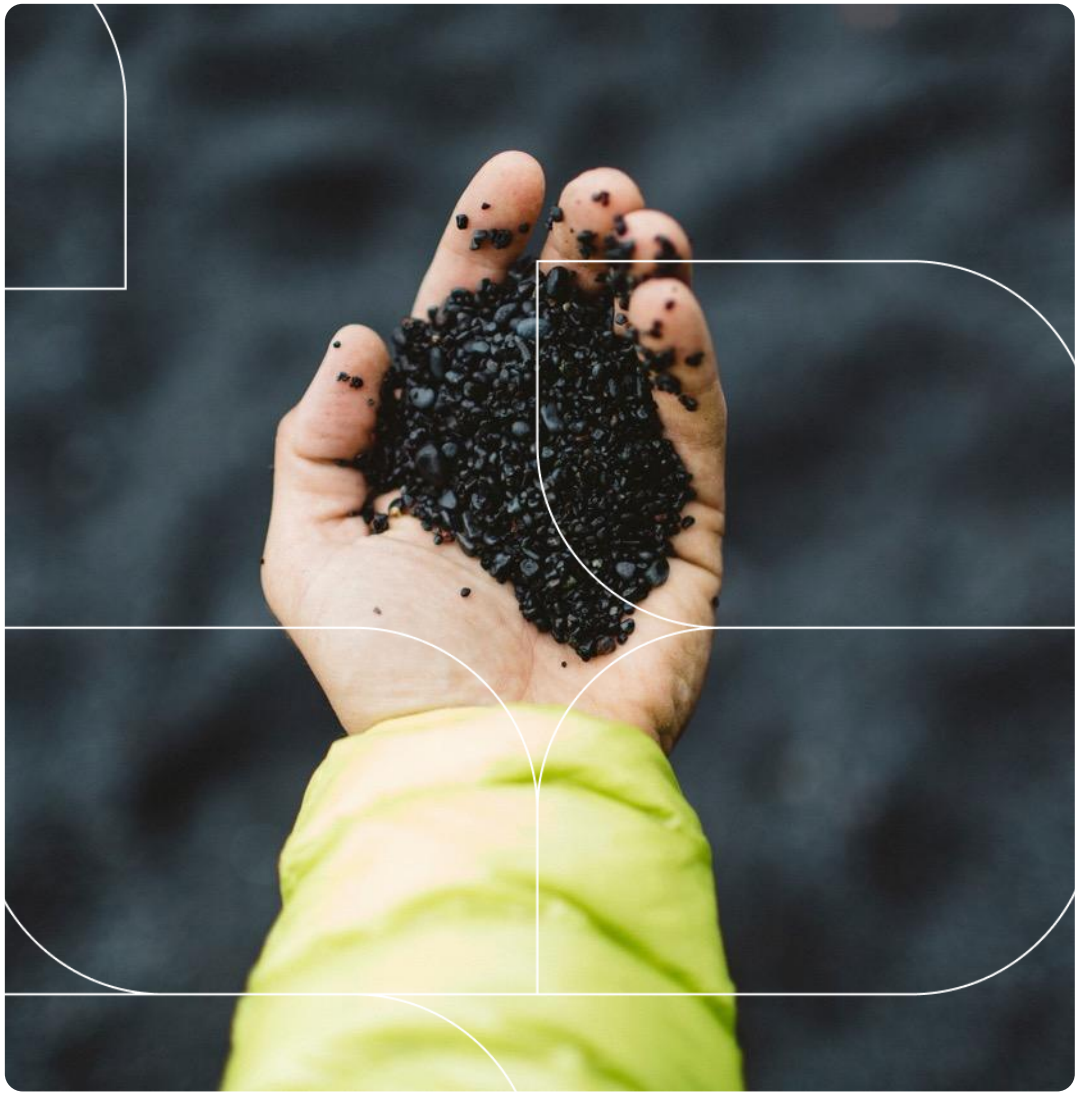
RENEWABLE CARBON INDEX

We realized that customers were starting to ask for product specific information as opposed to company-level- One of the first ways we translated sustainability into something customers could actually evaluate—moving from general claims to measurable, product-specific data–was Renewable Carbon Index (RCI).

RCI measures sustainability by dividing the number of carbons derived from renewable sources by the total number of carbons in an active ingredient. A high RCI surfactant, for example, contains a high percentage of carbon atoms from natural sources.

A “green product” is classified as above 75%- our line of commercial “green” offerings is above 60%.

Range of Renewable Carbon Index in IBC Products	**60-100%**



The Rise of LCAs & Customer Facing Industries

In consumer-facing industries, customers increasingly require LCAs to validate product-level environmental impact—this is no longer optional, but a requirement for doing business. This is when ESG started getting commercial for us.

We found that over 85% of our emissions are attributed to raw materials, whereas **production accounts for 0.002-0.004 kg CO2e/kg for our biobased surfactants**.

Product	GWP Emissions kg CO2e/kg
EdenSurf 800	0.89
EdenSurf 1200	1.04
TegraSurf 100A	0.87
TegraSurf 120	0.78

Industry Comparisons

Product	GWP Emissions kg CO2e/kg
Wheat Grain Derived APG[1]	1.60
C12-C14 Laureth-3[2]	2.52
C12-C14 Laureth-7[2]	1.94
C12-C15 Laureth-3[2]	2.67
C12-C15 Laureth-7[2]	2.31
Sulfonic Acid[2]	1.75
SLS[2]	1.63
C12-C14 SLES[2]	1.19
C12-C13 SLES[2]	2.43

From Claims to Proof – Make a Goal and WRITE IT DOWN

Customers are increasingly requiring third-party validation and regulatory alignment

- Biodegradability testing
- Regulatory validation
- Performance verification

Biodegradable OECD 301B

HARTENERGY.COM ESG AWARDS

ISO 9001 Certified Management System

Look for this symbol

which identifies USDA Certified Biobased Products

GREEN SEAL greenseal.org

Proud providers of: Verified raw materials

INTERNAL IMPACT

It’s easy to get siloed as the ESG lead, but due to our customers consistently asking for new information, it was key to stay in contact with sales teams as much as possible

Cross-functional collaboration

New data collection – Ecovadis, CDP, Global Compact

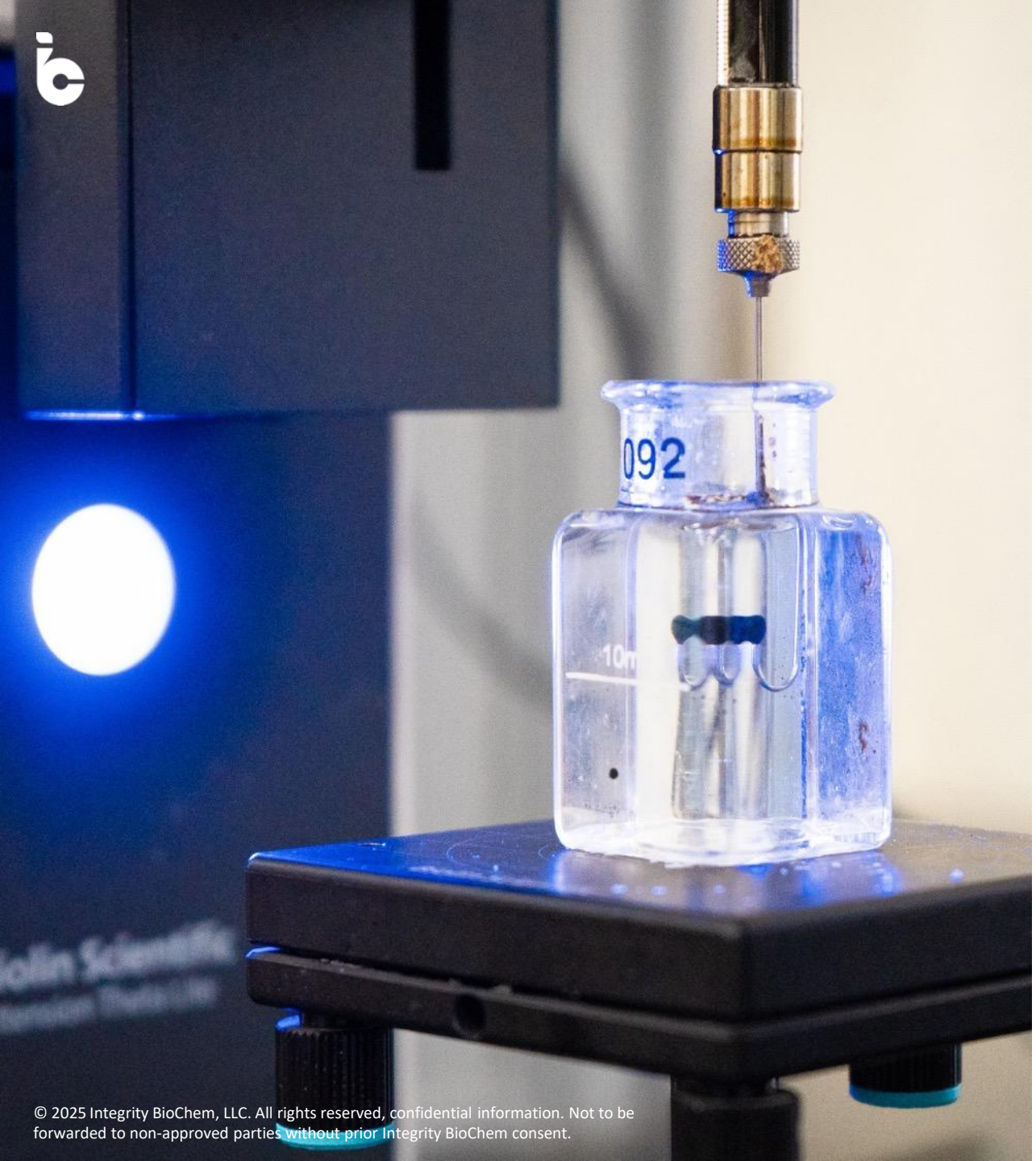
Energy Audits

New Consultants – Scope 1 and 2 emissions

Educating old consultants – waste and water management

New Ops measures

LCA Training and Coursework

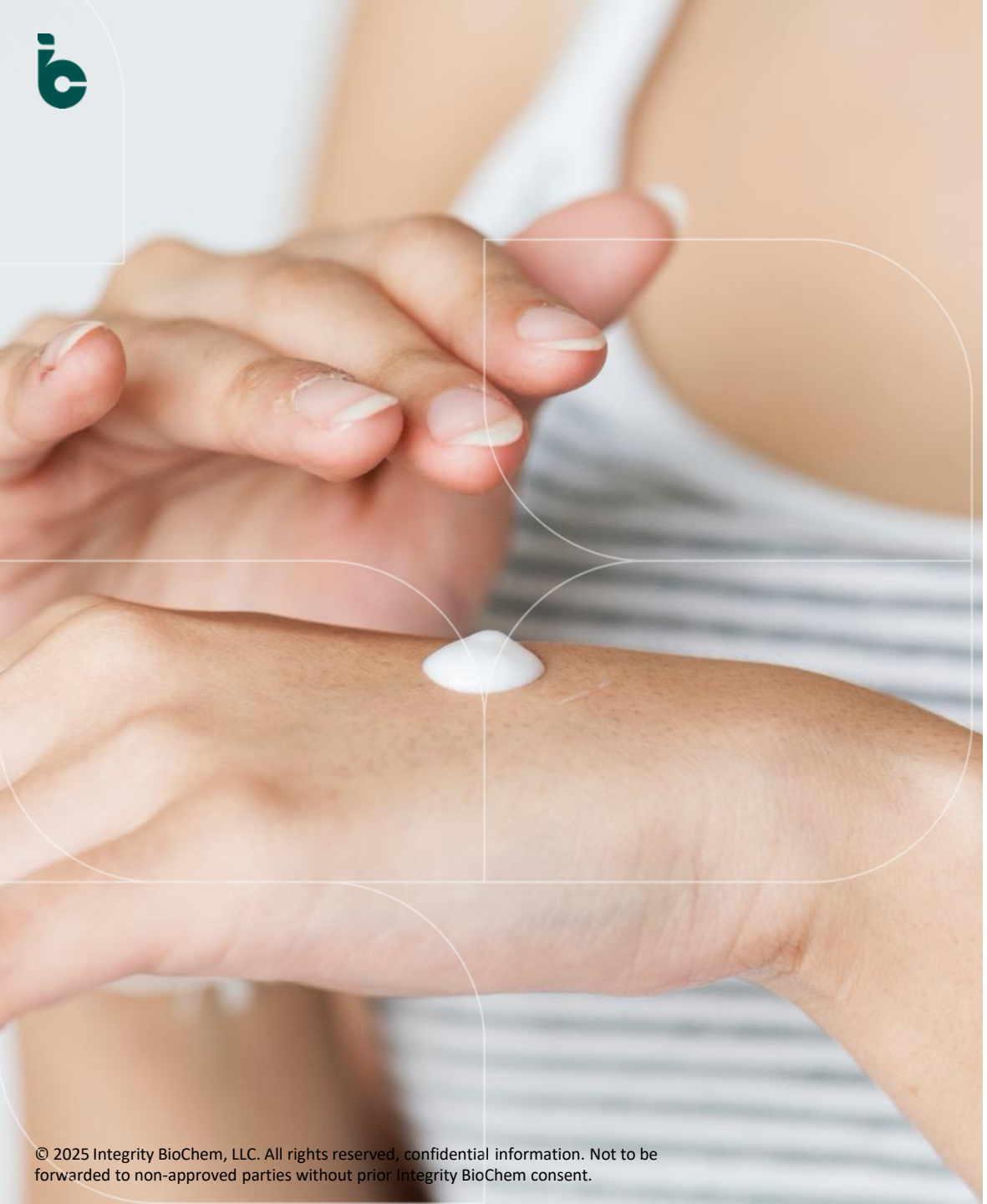


CHALLENGES

At our core we are still a privately owned technology company, meaning that we do not technically have to disclose anything or do these large reporting efforts- however, the world is moving forward like this – and we must move forward with it.

One of the biggest challenges is not lack of demand—but competing and sometimes conflicting customer expectations.

- Conflicting customer requests
- Data gaps & prioritization
- Resource constraints
- PMN Approvals- EPA Lags



WHAT WORKED

EcoVadis foundation- laying the framework helped us have a really good baseline so now we know the key metrics that most people ask, and we will be expanding to the CDP questionnaire and UN Global Compact this year.

LCA expansion- due to the demand, I was able to take a course on LCA, continue learning and expanding in my role and our customers are now coming to us asking us to perform LCAs on the products they are toll blending at our facility

Testing and compliance- Some items that started out as consultant based, such as LCA, Scope 1 and Scope 2 are now being pulled in-house, and we are growing our regulatory and third-party testing knowledge to grow our database of product data

APPLYING WHAT WE HAVE LEARNED

- I started out performing the LCAs only as a quick ask for the Personal care industry and with our expertise we have now grown this to touch four of our industries to date

- Even when not sharing this data externally, it has been very valuable in allowing us to see where our gaps are in product creation

"In addition to going through a materiality analysis, one of the first things a company does to understand its impacts on the world is to run a life cycle assessment of the whole business. It's eye-opening to discover where a company's impacts really are, and it helps blow up boundaries"

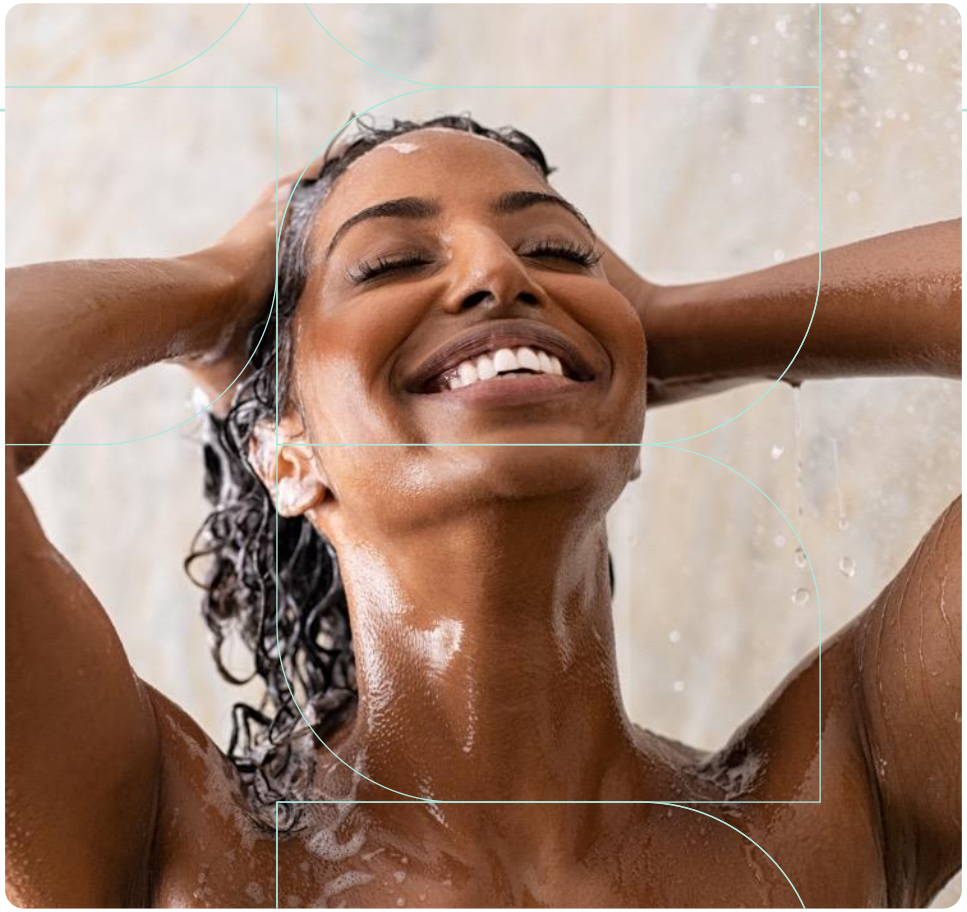
- Paul Polman & Andrew Winston: Net Positive

Total GWP Emissions for EdenSurf	kg CO2e/kg
EdenSurf 800	1.51
EdenSurf 1200	1.15
EdenSurf 1220	1.28

Total GWP Emissions for TegraSurf	kg CO2e/kg
TegraSurf 96	0.91
TegraSurf 100A	1.51
TegraSurf 120	0.83
TegraSurf 190	0.41

Total GWP Emissions for VeroSurf	kg CO2e/kg
VeroSurf 450	1.28
VeroSurf 470	1.51
VeroSurf 710	0.91

Total GWP Emissions for TegraFroth	kg CO2e/kg
TegraFroth 300	0.95



Not one size fits all

Start with **customer-driven priorities**

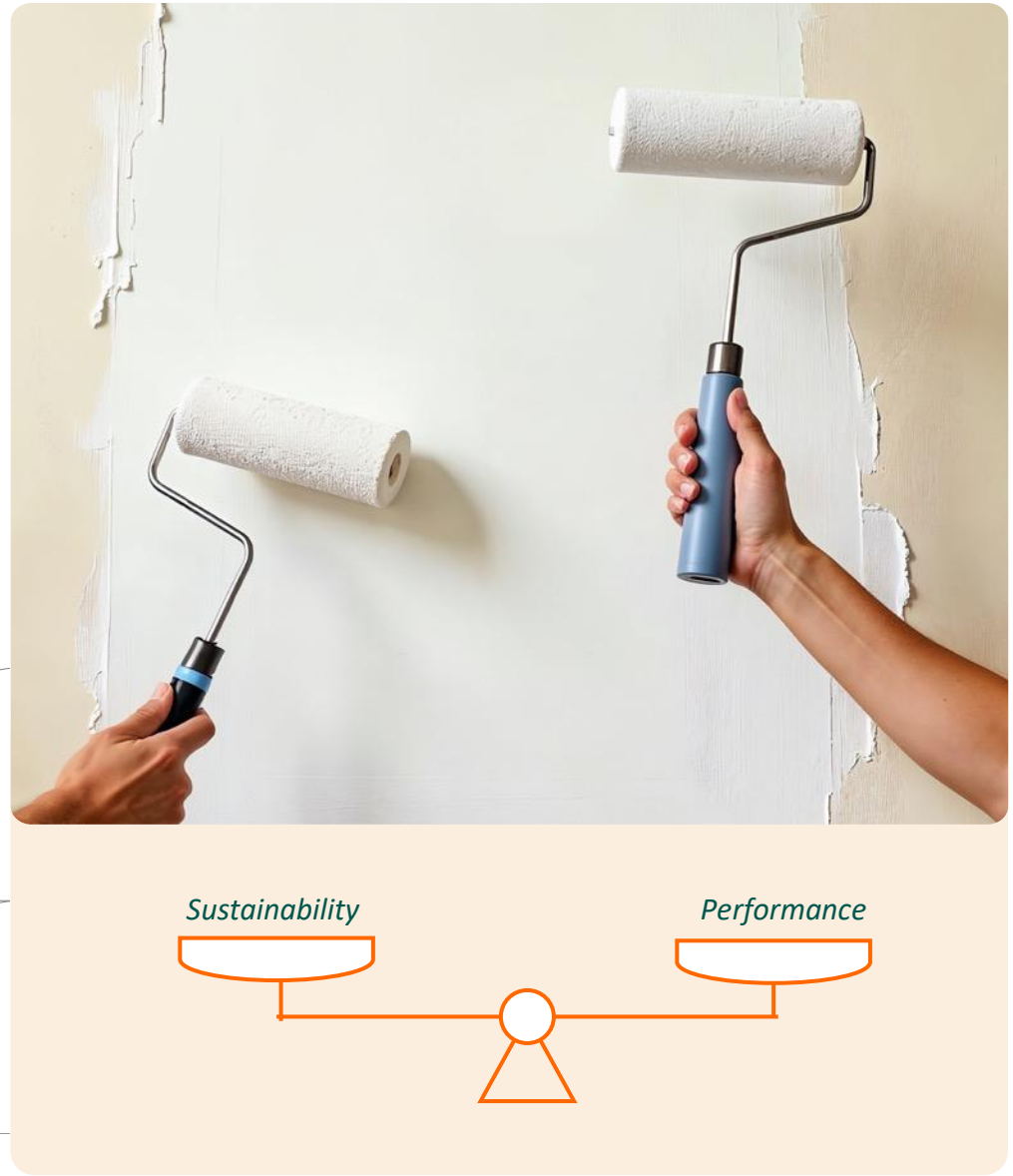
Build in phases (scorecards → product data → testing)

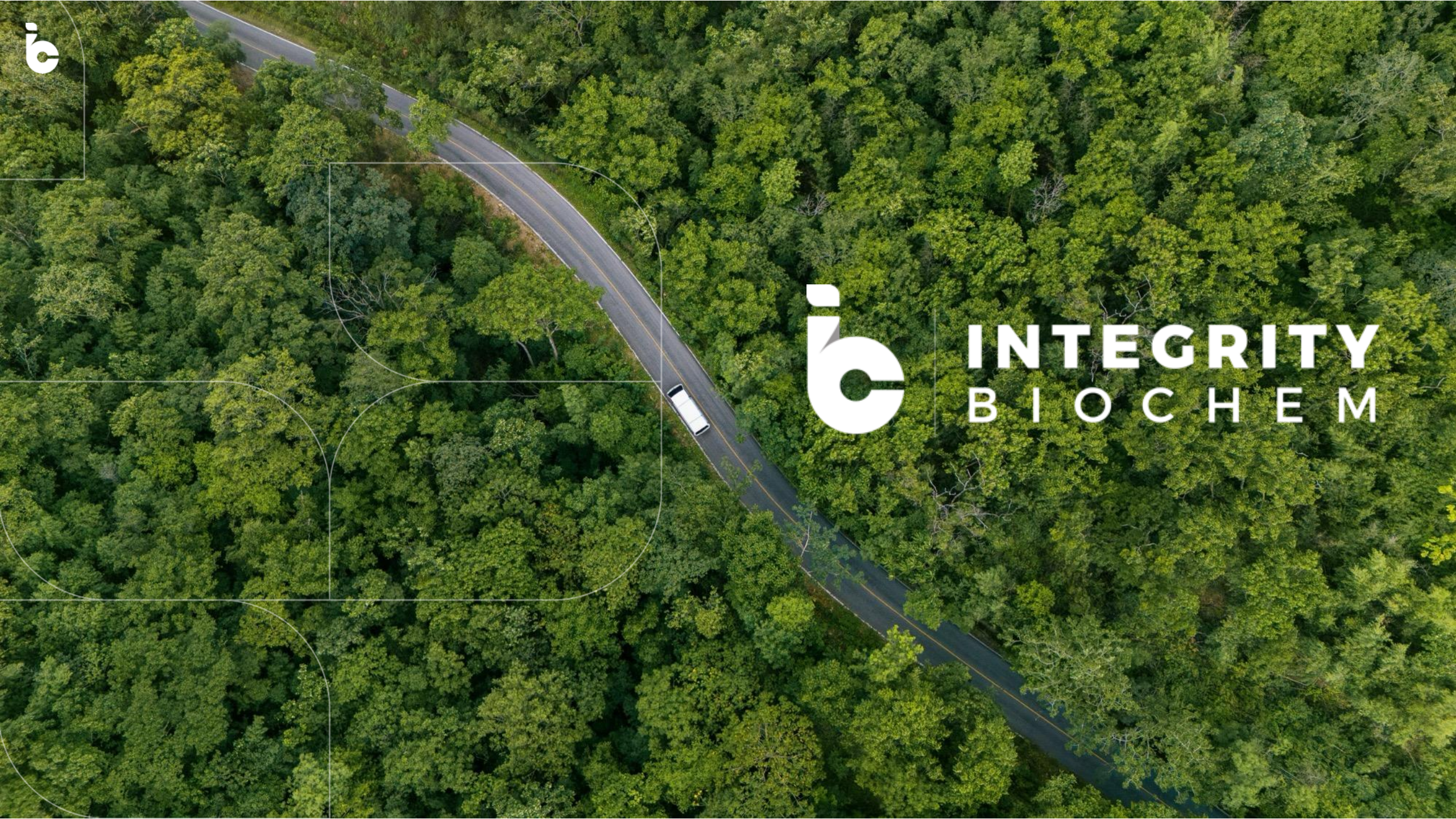
Don’t overbuild before demand exists

Your ESG strategy should mirror your customer base—not a generic framework. Meeting these requirements doesn’t just ensure compliance—it strengthens supplier relationships, builds trust, and positions you as a preferred partner.

Beyond Compliance

After running the gambit on sustainability, and a lot of customer asks, we have found that we had the right puzzle pieces all along – and by staying true to our original mission of being ”sustainable science for the whole world” – we are able to continue to improve in our rankings and score cards, but primarily we just need to continue the proper cross-collaboration both internally with our colleagues and externally with our customers.

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