



BioTwin

***Hemp Wall Studs.
Lower Carbon. Better Acoustics.***

Investment Deck - August 2025

Backed by:



Innovate
UK



*Kit Chong
CEO
kit@biotwin.co.uk
+44 7966611868*

PROBLEM

The steel stud hasn't changed in 100 years.

*It's time to **decarbonise** the inner bones of buildings.*

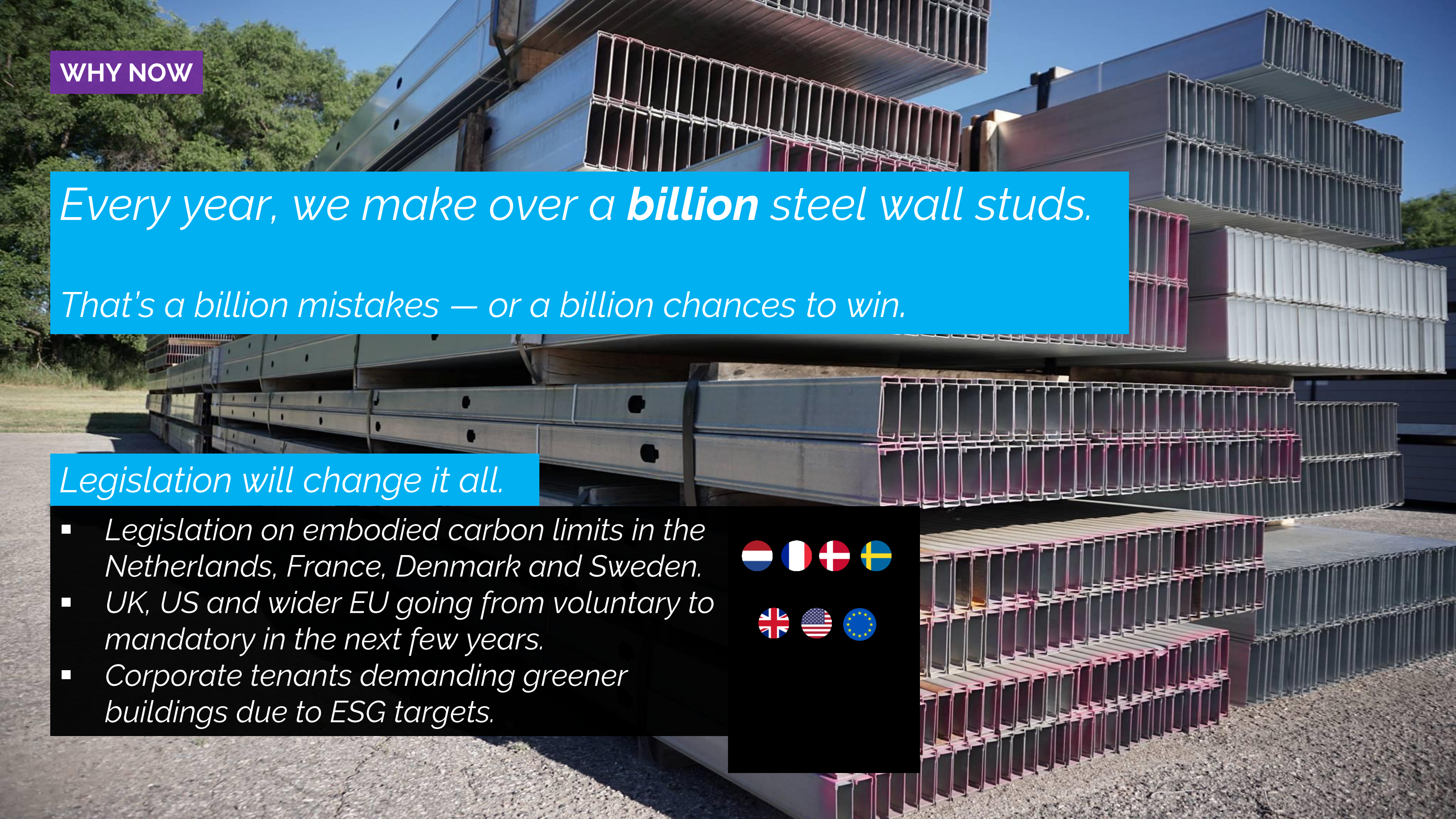
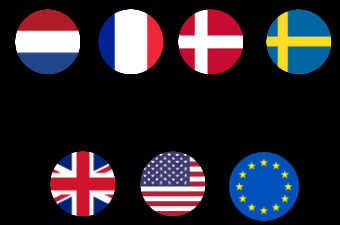


WHY NOW

*Every year, we make over a **billion** steel wall studs.
That's a billion mistakes — or a billion chances to win.*

Legislation will change it all.

- *Legislation on embodied carbon limits in the Netherlands, France, Denmark and Sweden.*
- *UK, US and wider EU going from voluntary to mandatory in the next few years.*
- *Corporate tenants demanding greener buildings due to ESG targets.*



SOLUTION

BioStuds – Hemp Based Wall Studs

***Lighter, quieter, cleaner. Drop-in replacement.
Performance verified.***

- *Fire resistance – meets 60 and 120 min compliance*
- *Sound insulation improvement +1 to 5dB vs steel*
- *Structural strength on par with 0.5mm gauge steel studs*
- *Manufactured in the UK. Materials imported from Europe.*

Testing verified by **BRE**, a training, testing, certification and standards organisation.

<https://bregroup.com>



PRODUCT & IP

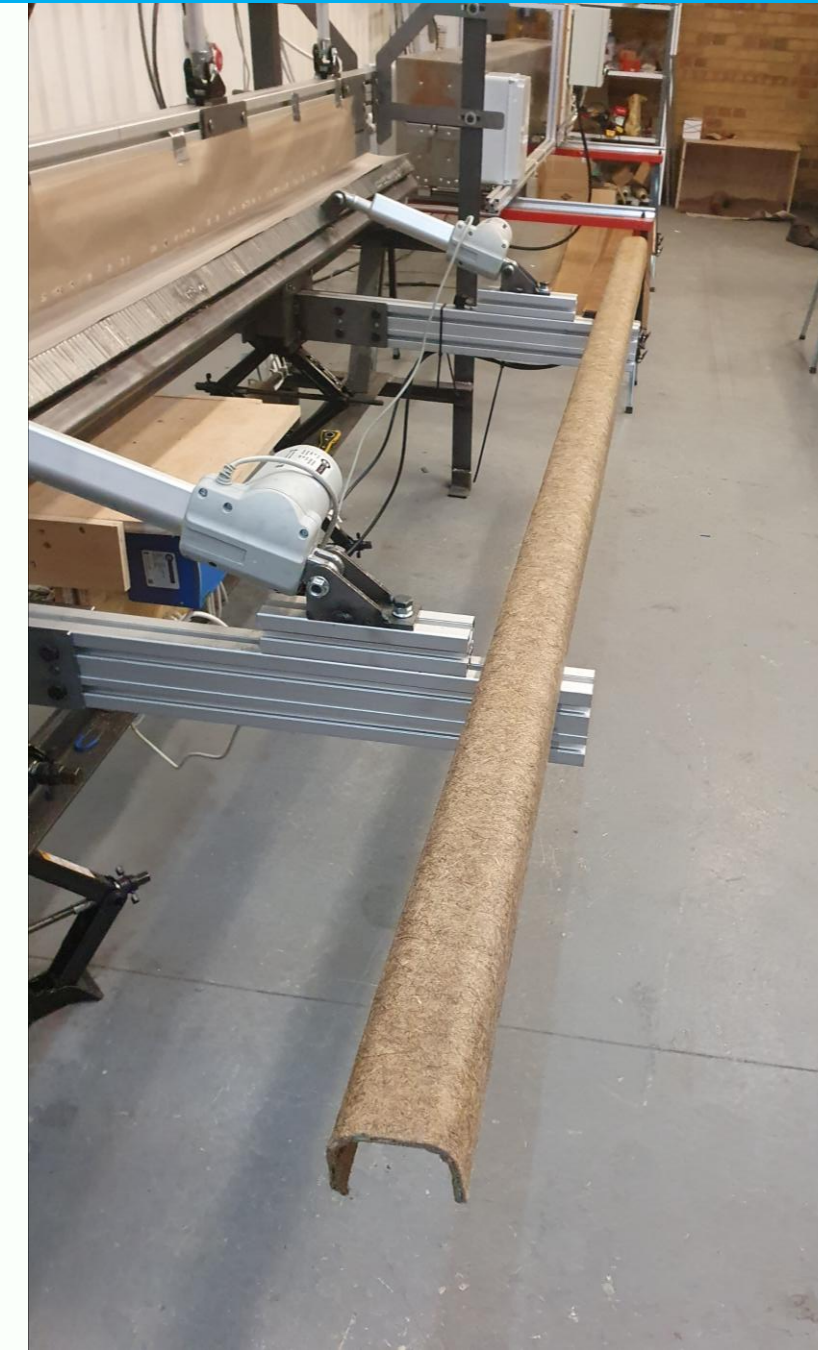
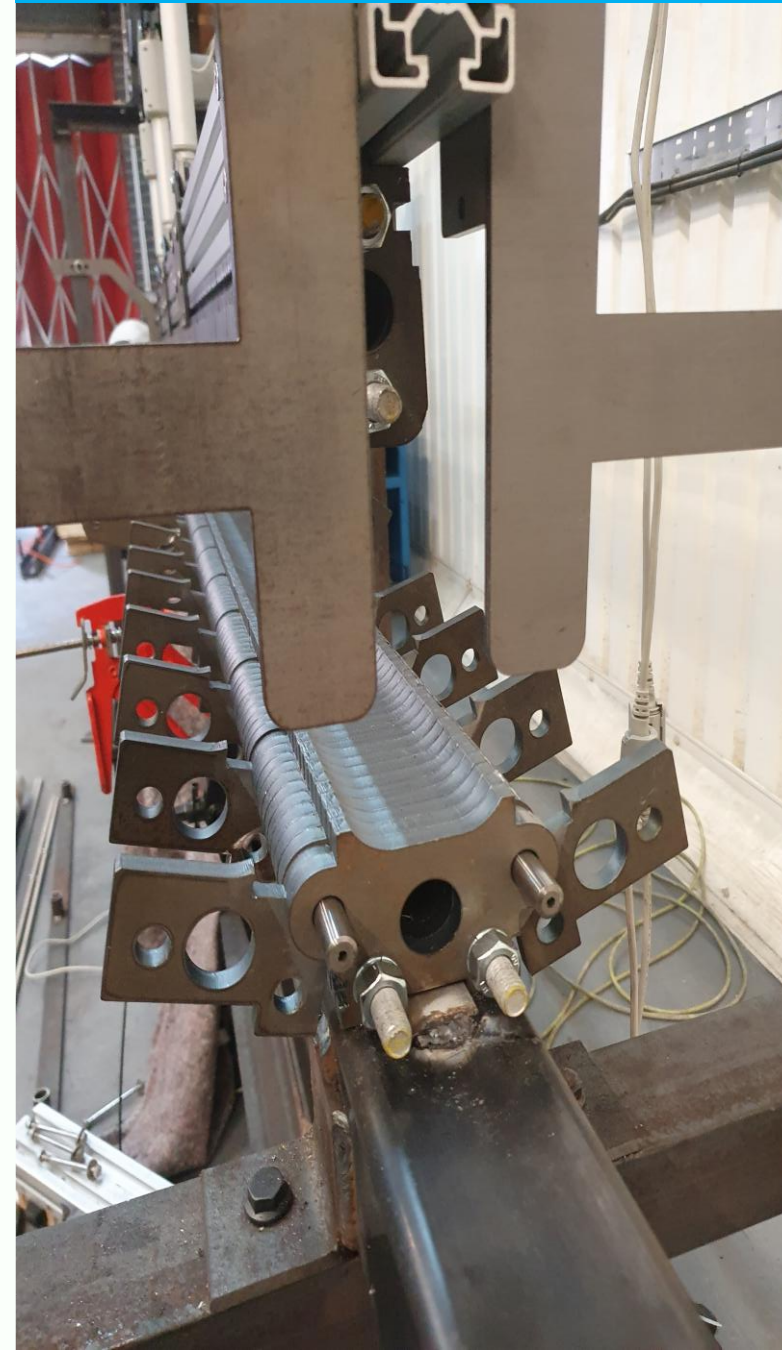


Performance verified by BRE

- Passed 60 and 120 minutes fire resistance tests
- Acoustic tests show 1-5 dB improvement
- Structural load, 2.6m high

IP & Defensibility

- UK patent pending + PCT cover material + manufacturing
- BRE fire, acoustic and structural tests lock in spec advantage
- Hard to replicate: Custom machinery, layered material composition and supply chain know-how create real barriers



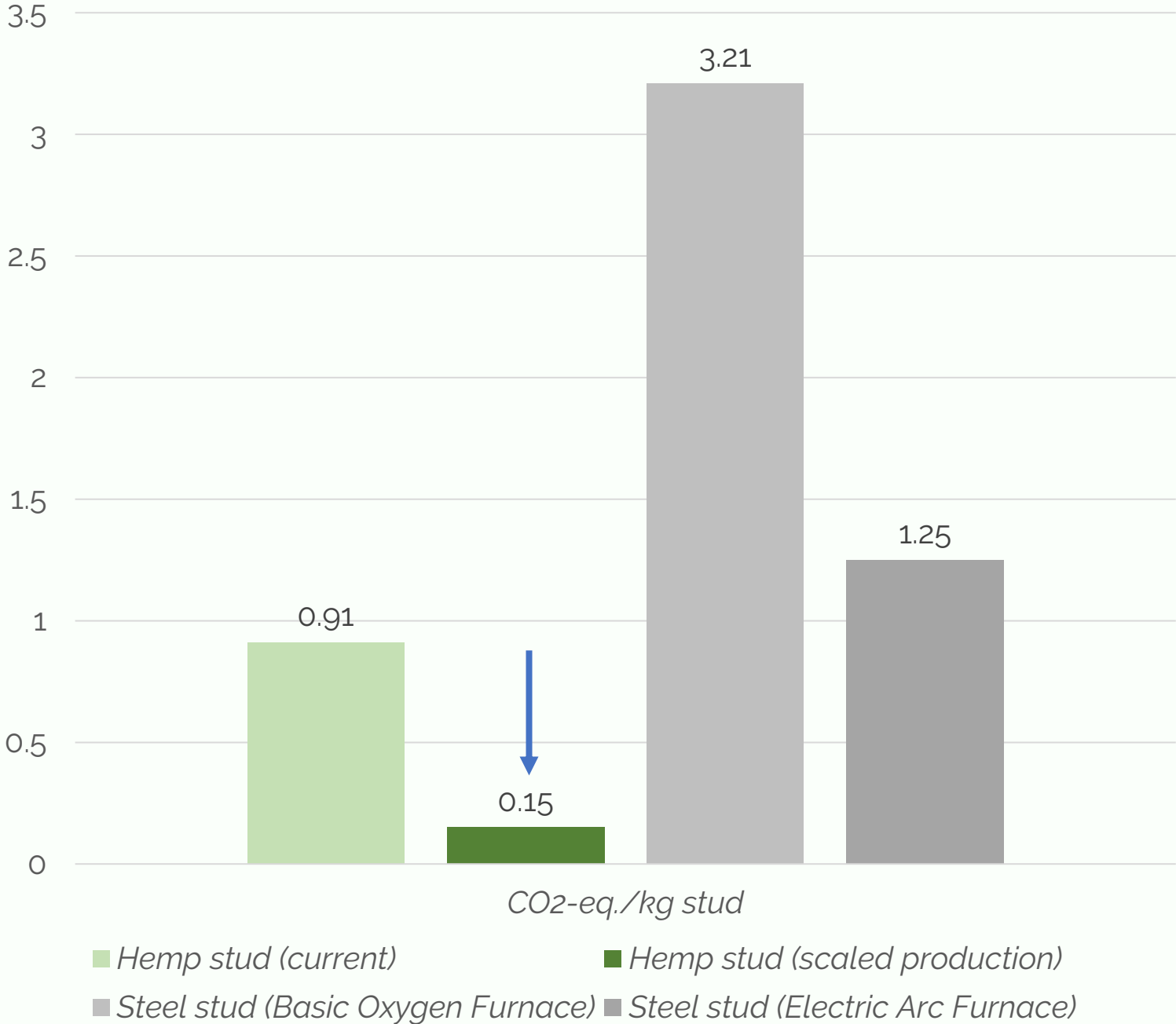
CARBON ADVANTAGE

95% lower in carbon than a steel stud when scaled.

Currently 71.5% lower.

From 71.5% to 95%

- Switch to organic fertilisers → cuts emissions from hemp farming by up to 67%.
- Use 100% renewable energy → removes most carbon from processing steps.
- Local sourcing → reducing transport from ~6,500 km to <500 km slashes logistics footprint.



Lifecycle Analysis Reports conducted by **Imperial Consultants and BRE.**

EARLY TRACTION

First Paid Pilot, Science Park Retrofit

Planned stud installation for Sep 2025 for London university.

Second pilot in September, New York ***3 x LOIs signed to date.***

Receiving one inbound enquiry each week without any advertising.

In discussions with:

- Mott MacDonald
- A&Q Partnership
- CannonDesign
- Buttress
- Skanska

MARKET & WEDGE

SOM

In 5 years, produce 8m units/year

\$31.2m
(0.5% of SAM)

SAM

Steel Stud Partition Systems

\$6.3 billion

Source: QYResearch

TAM

Global Steel Framing

\$38.57 billion

Source: Research Nester

Commercial retrofits: fastest path to spec

First pilot with science park in London

Target segments: offices, retail, hospitality
Unlocking other wedges:

- *Residential high-rise buildings*
- *Industrial*
- *Modular offsite*
- *Global expansion*

GO TO MARKET

1. Start Where Specs Move Fast

Commercial retrofits offer quick wins with minimal red tape

- **Pilots projects** in offices, science parks and retail (from Aug 2025)
- **Use BRE test data** to support contractor spec-in and architect confidence
- **Target early adopters** with fast build and ESG goals

2. Nail the Channel, Then Grow

Get stocked by merchants/distributors, spec'd by architects and installed by contractors

- **Distributor/Merchants:** ride contractor pull-through, start with regional partners
- **Architects:** CPD briefings, spec via BRE test data
- **Contractors:** pilot installs, trade shows, early discounts

3. Win Verticals First, Before Borders

Expand into retrofits, modular and ESG-led sectors before scaling globally

- **Offices & hotels:** combine acoustic + carbon for ESG gains
- **Residential retrofits:** target noise + thermal upgrades in high-rise apartments
- **Modular builders:** drop-in fit with standard stud specs
- **Proof via pilots:** build case studies before global push

BUSINESS MODEL



Outsourced Manufacturing

BioStud + other products

Sell to: Developers, Distributors, Merchants and Contractors










Units (per 2.6m stud)	Material costs	Manufacturing costs	Logistics costs	Total costs	Per unit cost
275	£732	£275	£1,500	£2,507	£9.12
1250	£3,936	£1,250	£1,500	£6,186	£4.95
10,000	£31,491	£5,000	£3,000	£39,491	£3.95
30,000	£82,663	£15,000	£50,000	£100,663	£3.36
100,000	£236,180	£15,000	£100,000	£266,180	£2.66
1,000,000	£1,574,531	£80,000	£200,000	£1,754,531	£1.75

- Revenue Streams**
- Core: Stud sales to contractors, merchants, and developers (wholesale £3-4 per unit)
 - Additional products, e.g. sound board, horizontal channels
 - Optional: Verified carbon credit monetisation (projected from LCA-backed savings)

Next batch

Cost parity

COMPETITION

Stud type	Low carbon	Fire Resistance 60 & 120 mins (with plasterboard)	Installer safety & handling	Sound Single layer wallboards	Weight	Cost
<p>Steel</p>  <p>    </p>	✗	✓	✗	35db	1.46KG	£3 - 4 (wholesale)
 <p>    </p>	✓	✓	✗	33db	3.47KG	£3 - 4 (wholesale)
	✓	✓	✓	37db	1.6KG	Cost parity (30,000 units)

PROJECTIONS

Cost parity with steel studs in 2027 *Margin Turns Positive at Scale*

<i>Year</i>	<i>Revenue</i>	<i>Profit</i>	<i>No. of customers</i>
2025	£15,000	-£386,750	2
2026	£265,000	£65,000	8
2027	£3,600,000	£2,071,000	24
2028	£10,400,000	£5,105,000	41
2029	£51,000,000	£16,230,000	146



TEAM

We've built physical products before. And exited!
Scaled them. Sold them.
Now we're doing it for the planet.



Kit Chong
CEO

- ✓ 2 startup exits
- ✓ Ex-Alibaba



Matt Elton
CTO

- ✓ Design studio
- ✓ Furniture mfg



Paul O'Dwyer
Advisor

- ✓ 20+ years oil & gas
- ✓ Commercial/operations



Jane Goddard
Advisor

- ✓ Deputy CEO, BRE
- ✓ Board Trustee



Brian Valentine
Advisor

- ✓ Change & Ops Strategist
- ✓ CRE investor



OUR ASK

Seed round close by Oct 2025

£2.6 million

SFC Capital and Ventures Together to join round.

Funding	Allocation	Description
<i>Team</i>	<i>30%</i>	<i>Key hires in ops, commercial and product</i>
<i>Manufacturing</i>	<i>30%</i>	<i>Pilot-scale outsourced production, quality setup</i>
<i>R&D</i>	<i>20%</i>	<i>Acoustic tuning, new variants</i>
<i>Overheads</i>	<i>20%</i>	<i>Runway for ops, insurance, certifications</i>

Interested? Email kit@biotwin.co.uk





BioTwin



MILESTONES



Partners



Partners



Funding

Investor
£250k



Grants
£402k



Accelerators

PLUGANDPLAY

IMPEL

Imperial College
 London



OPEN LONDON



Undaunted

RISK & MITIGATIONS

<i>Risk</i>	<i>Mitigation</i>
<i>Supply chain fragility</i>	<i>Identified and engaged with multiple suppliers qualified for hemp, resin and processing steps</i>
<i>Contractor adoption resistance</i>	<i>BRE-verified performance + pilot projects to build case studies</i>
<i>Price competitiveness vs steel</i>	<i>Costs drop with scale; path to parity modeled at ~2M units/year</i>
<i>Regulatory acceptance / spec-in</i>	<i>Fire, acoustic and structural tests align with UK standards (e.g. BRE, ISO)</i>
<i>Manufacturing complexity at scale</i>	<i>Designed for outsourced production with modular, scalable processes</i>
<i>Substitution or IP circumvention</i>	<i>Patent filings on both material + manufacturing; LCA-backed performance moat</i>