

FORTIFYD™

EVERY RIDER · EVERY IMPACT · EVERY TIME

**2 PATENTS PENDING:*****“Protected from Design to Performance”***

- **Design:** tunable plate-lattice impact architecture
- **Software:** algorithms for 3D printed impact and application-specific design

The Standard Is Changing. So Should the Liner.

Motocross puts riders through more frequent, higher-consequence impacts than almost any sport on the calendar — and EPS foam, built for a single top-down hit, wasn't designed for what's coming.

~50%

Of youth motocross athletes treated at a Level I trauma center over 10 years had a diagnosed concussion — most helmets are only rated for one hit.

2026

FIM's new FRHPhe-02 standard becomes mandatory in FIM championships, adding oblique & rotational impact tests beyond today's linear-only certs.

2,413

Severe head & neck injuries from motocross treated in the ER (US, 2000–2011) — the 2nd-highest count of any extreme sport studied.

One Liner, Engineered for Every Direction of Impact

Fortifyd replaces static EPS foam with a computationally designed lattice tuned to impact direction and force, then 3D-printed as a drop-in liner. Software-driven updates eliminate costly new molds and production-line retooling.

**Stronger Protection**

6x more energy absorbed. 10x tougher impacts. No extra weight. 1,000 compression cycles and still going.

**Customizable Safety**

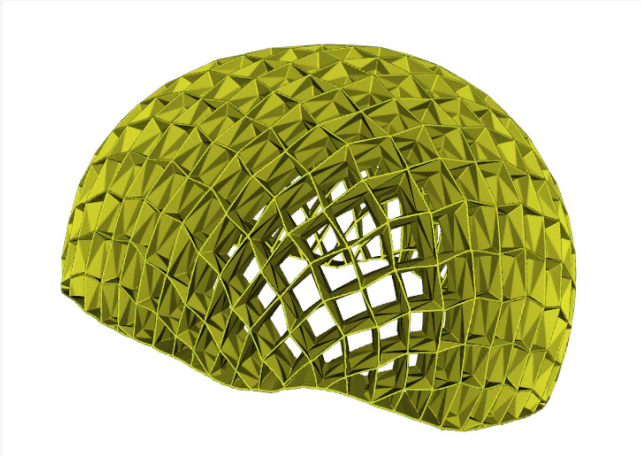
Software optimizes and customizes each helmet zone for task-specific impact risks before manufacturing.

**OEM-Ready**

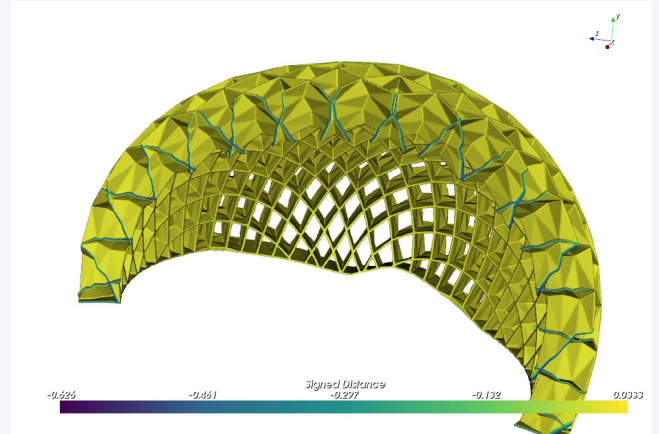
Drops into existing helmet shells — no retooled production line.

From Lattice Model to 3D Printed Liner

A working half-scale prototype, printed straight from the software model — no hand-tooling, no foam mold.



Full liner geometry — half-scale, 3D-printed



Signed-distance field — simulation output

“Protected from Design to Performance.”

Pilot Program - Let's Race Together!

We're looking for pilot partners — motocross helmet brands and off-road gear manufacturers — ready to run a pilot test of next-gen impact protection, ahead of the 2026 shifting industry standards.

Early pilot partners receive exclusive benefits. [Contact us to learn more.](#)

Rolling basis, limited slots

Teri Ham, Founder & CEO

contact@fortifyd.io · www.fortifyd.io



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Women and Minority-Led · CU Boulder Research Spinout

Sources: (1) Youth motocross concussion data via MX-Gear.com summary of Level I trauma-center study (PMC5548031); FIM FRHPhe-02 helmet homologation standard (fim-moto.com, mandatory 2026); Fortifyd internal simulation testing. (2) Smith, L., Hayes, B., Ford, K., Smith, E., Flores, D., & MacCurdy, R. (2024). Tunable metamaterials for impact mitigation. *Advanced Materials Technologies*, 9(6), 2301668. <https://doi.org/10.1002/admt.202301668> (3) Sharma et al., "The Current State of Head and Neck Injuries in Extreme Sports," *Orthopaedic Journal of Sports Medicine*, 2015 (motocross HNI data, 2000–2011 NEISS database).