Lightweighting for the Masses™

WEAV3D®

JUNE 2021

About WEAV3D

2014

Technology invented

2017

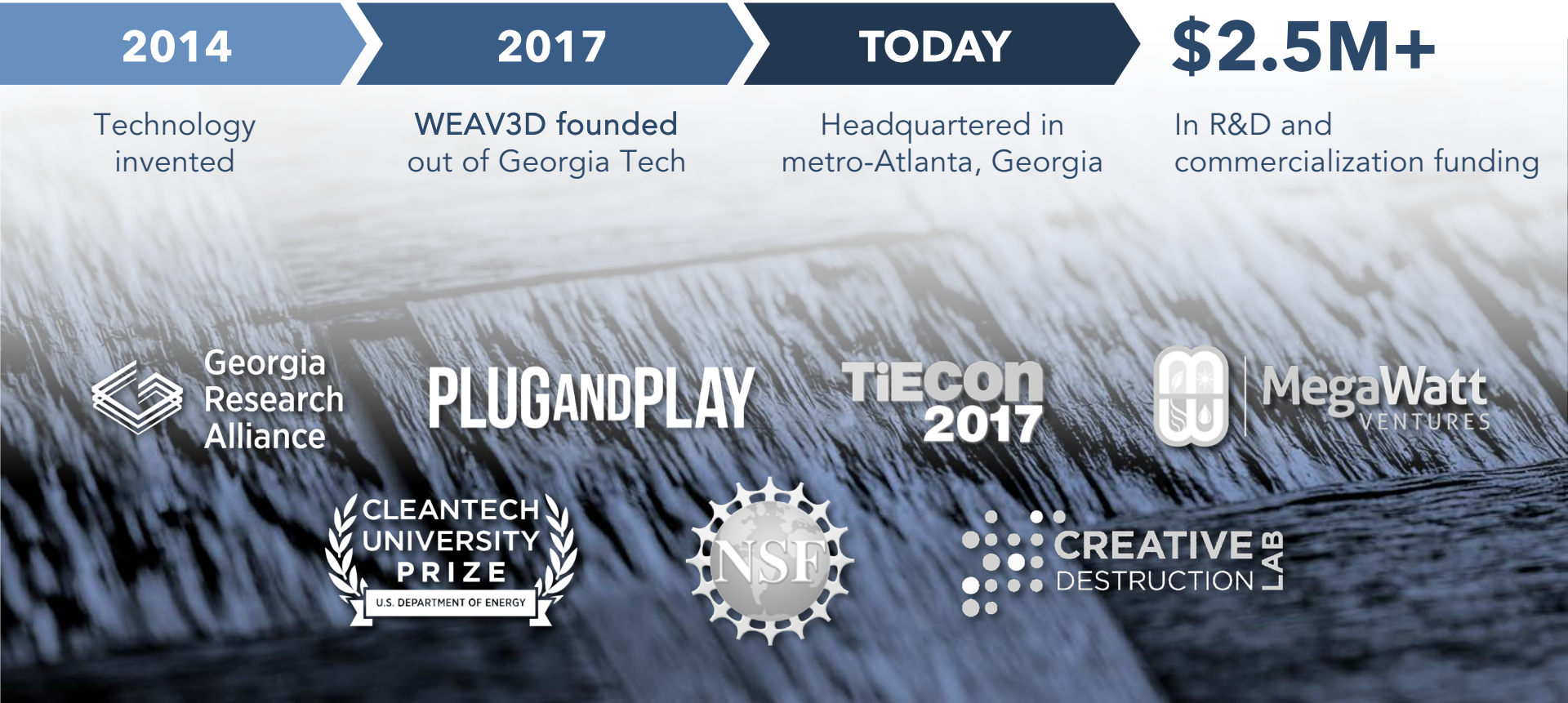
WEAV3D founded out of Georgia Tech

TODAY

Headquartered in metro-Atlanta, Georgia

$2.5M+

In R&D and commercialization funding



Mass Market Applications are Historically Underserved by Composites

AUTOMOTIVE

AEROSPACE

SPORTING GOODS

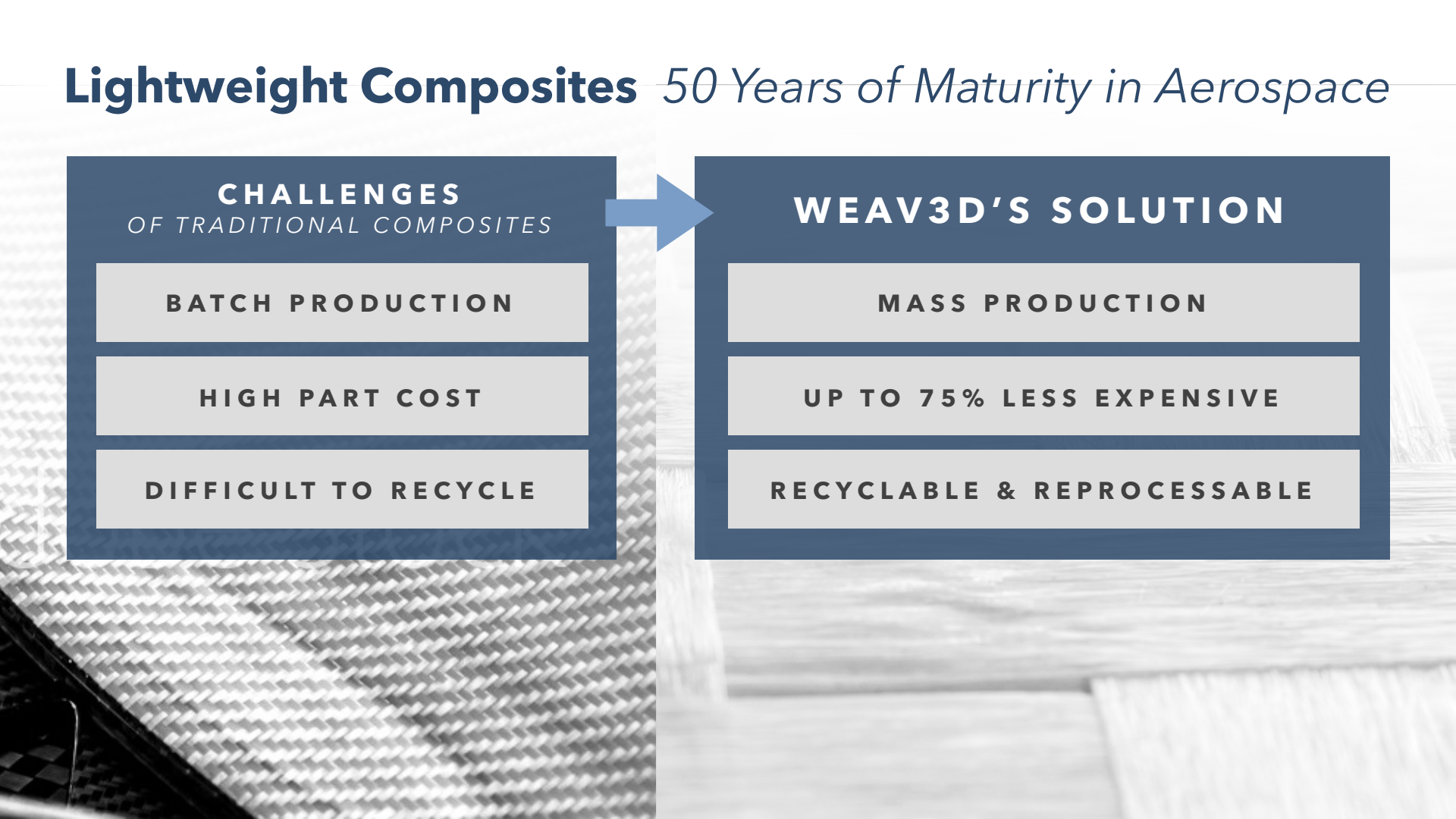
Lightweight materials are expensive due to **both** material and process cost — WEAV3D addresses process cost challenges inherent to traditional composites

Lightweight Composites *50 Years of Maturity in Aerospace*

CHALLENGES
OF TRADITIONAL COMPOSITES

- BATCH PRODUCTION
- HIGH PART COST
- DIFFICULT TO RECYCLE

Lightweight Composites *50 Years of Maturity in Aerospace*



CHALLENGES
OF TRADITIONAL COMPOSITES

- BATCH PRODUCTION
- HIGH PART COST
- DIFFICULT TO RECYCLE

WEAV3D'S SOLUTION

- MASS PRODUCTION
- UP TO 75% LESS EXPENSIVE
- RECYCLABLE & REPROCESSABLE

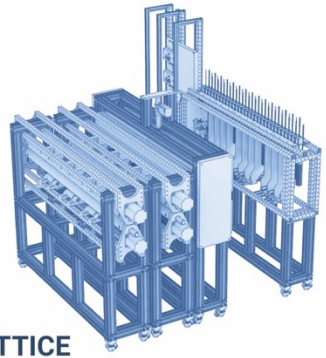
Rebar for Plastics®

Process Overview

THERMOPLASTIC PREPREG TAPE

Commercially Sourced

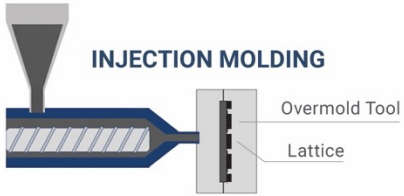
LIGHTWEIGHT STRUCTURAL COMPOSITE PART

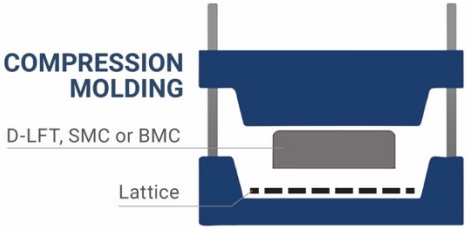


LATTICE WEAVING & CONSOLIDATION

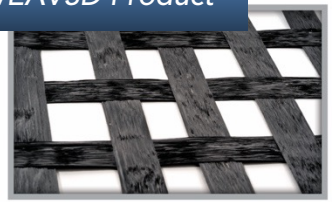
WEAV3D Process

Standard Molding Processes



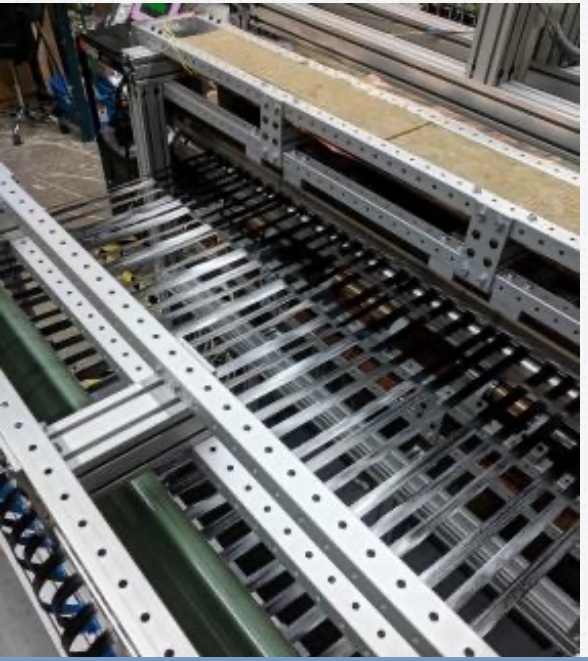


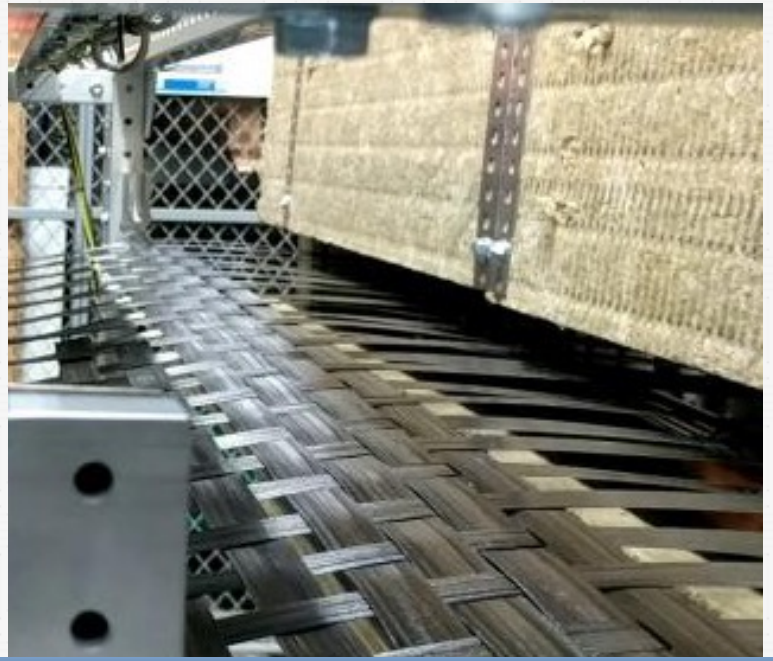
WEAV3D Product

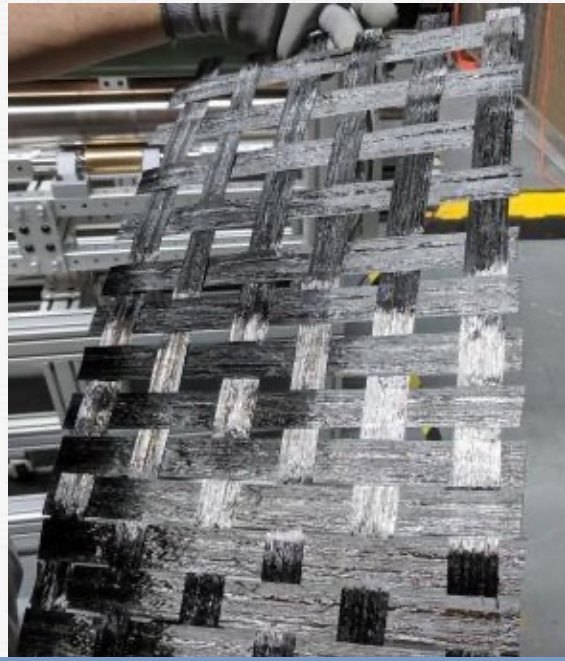


TRIMMED COMPOSITE LATTICE

WEAV3D Full-Scale Pilot Machine







Patent-pending customizable lattices and lattice forming process

Why Composite Lattice?

TUNABLE

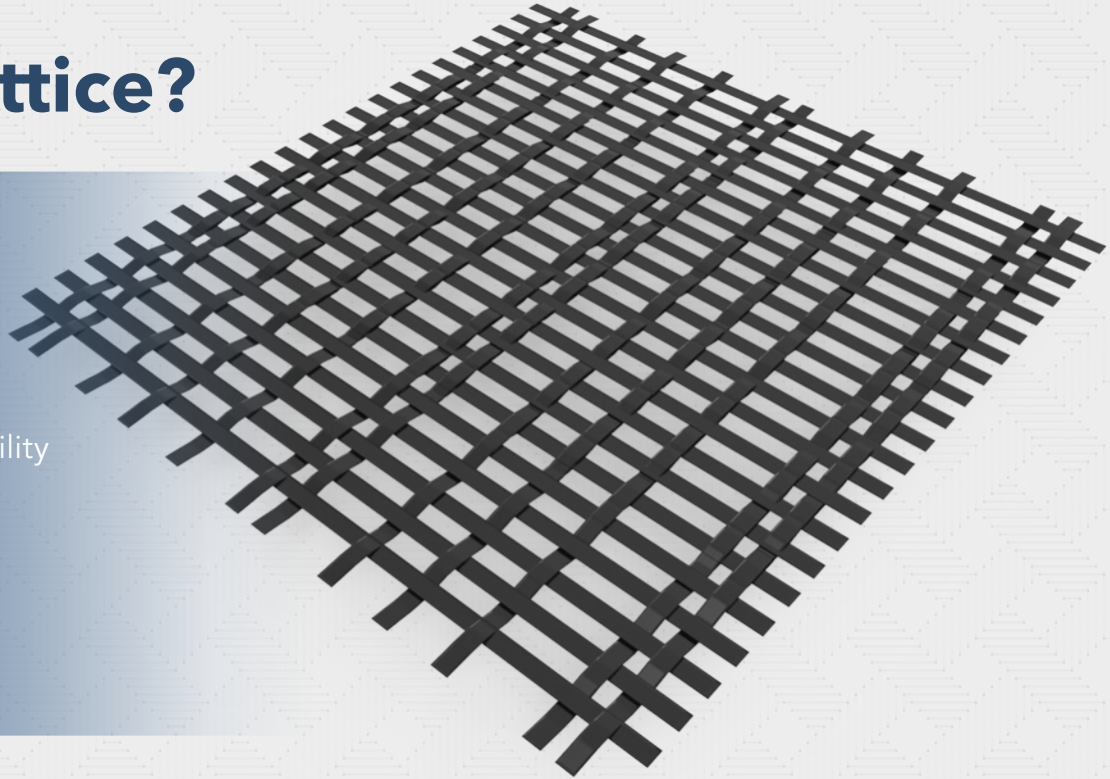
- Locally optimized:
  - Lattice density
  - Tape material

HANDLEABLE

- Woven and welded at interlace for stability
- Sheet or roll format

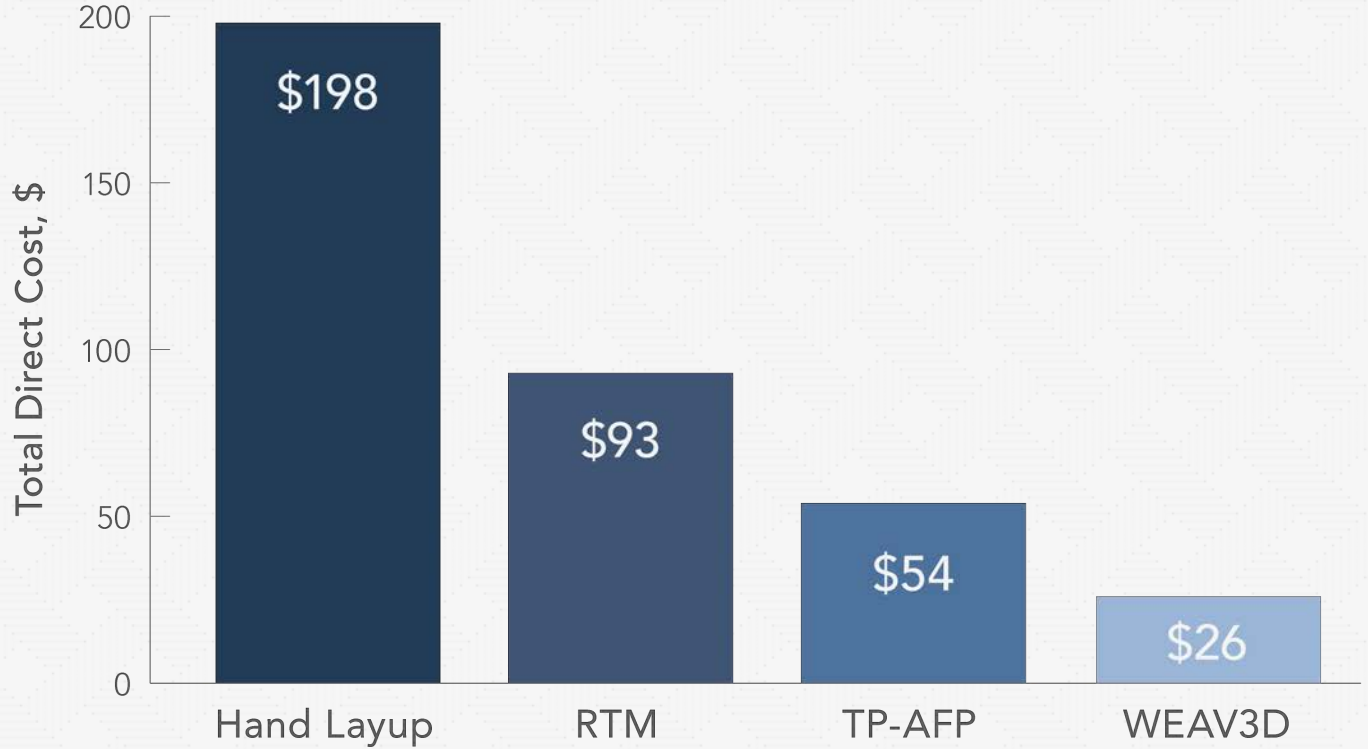
FORMABLE

- Reheat/reform
- Form in mold
- Colamination

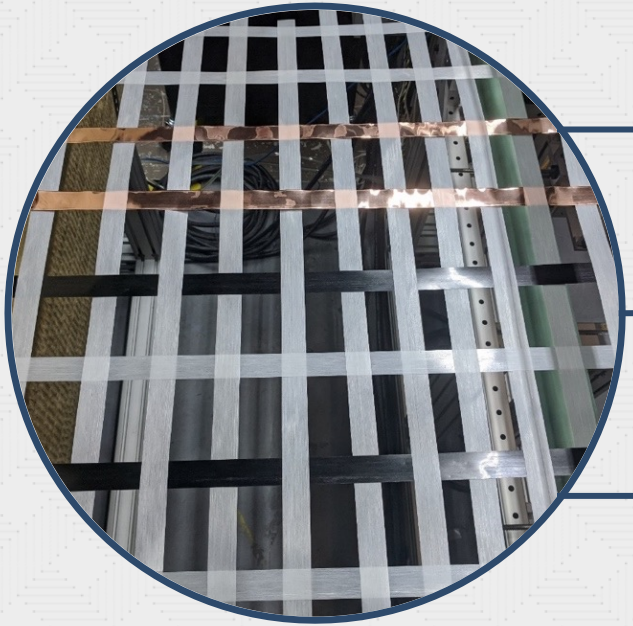


Strategic use of UD tapes in lattice provides a cost-effective and adaptable solution

Competitive Process Cost Comparison for Automotive Door Panel



Smarter than Steel™ Hybrid Material Lattices



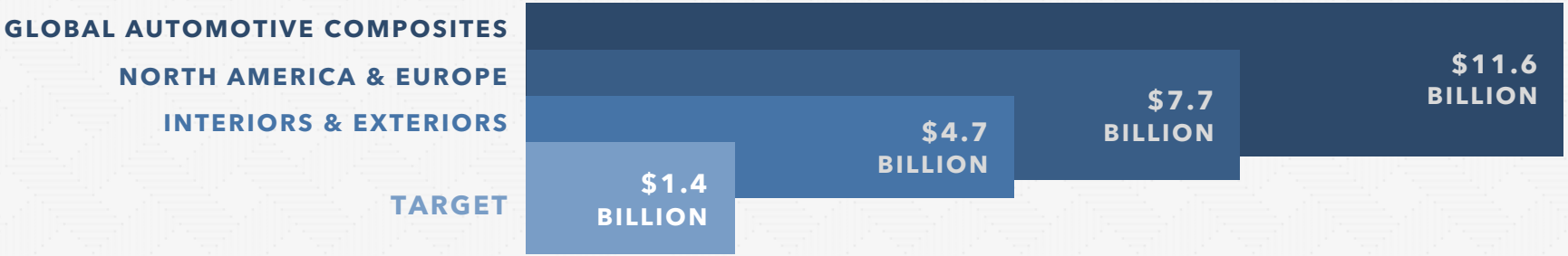
Enable Smart Structures

- Power
- 01001 11010 Data
- Thermal

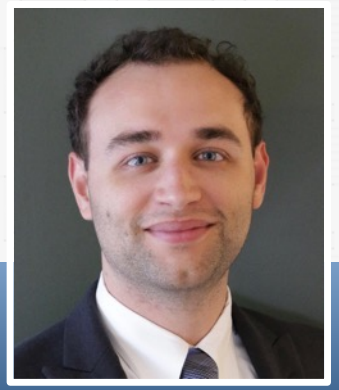
WEAV3D lattices can combine structural reinforcement with transmission materials

Rebar for Plastics® Automotive Opportunities

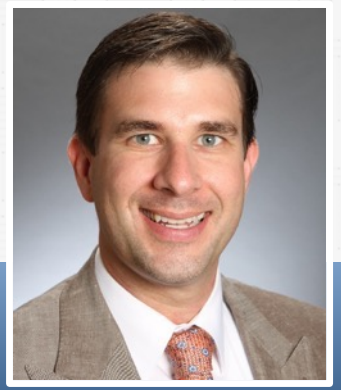
2025 Automotive Composites Market



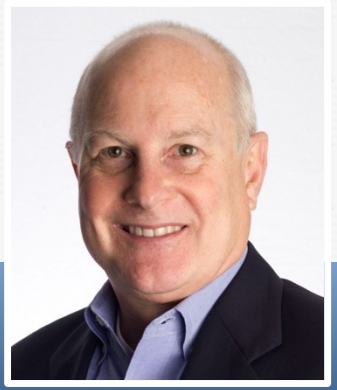
Leadership Team



CHRIS OBERTSE, PH.D.
Founder & CEO



LEWIS MOTION
Founder & COO



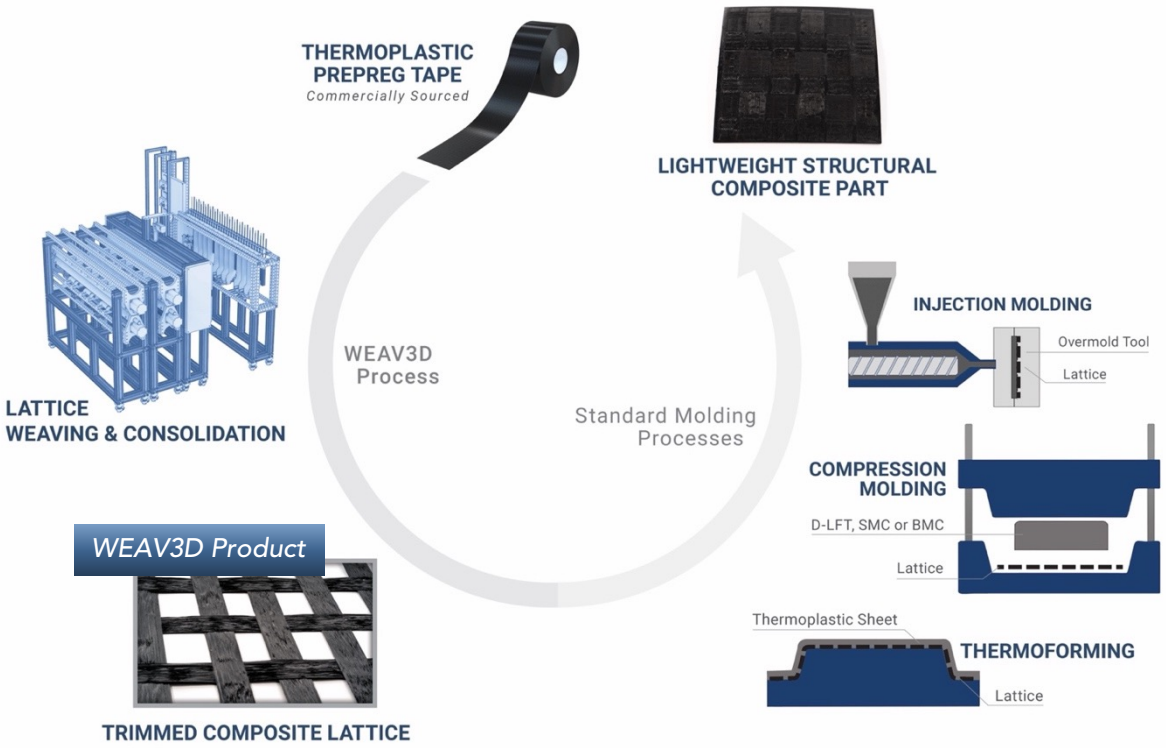
BURT SMITH
VP of Sales

Engineering Team

PHILLIP CHENG
Principal Electrical Engineer

MEGHANA KAMBLE
Finite Element Analysis Engineer

COLEEN TRAN
Process Engineer



WEAV3D®

WEAV3D is partnering with OEM and Automotive Tier suppliers to support automotive product development.

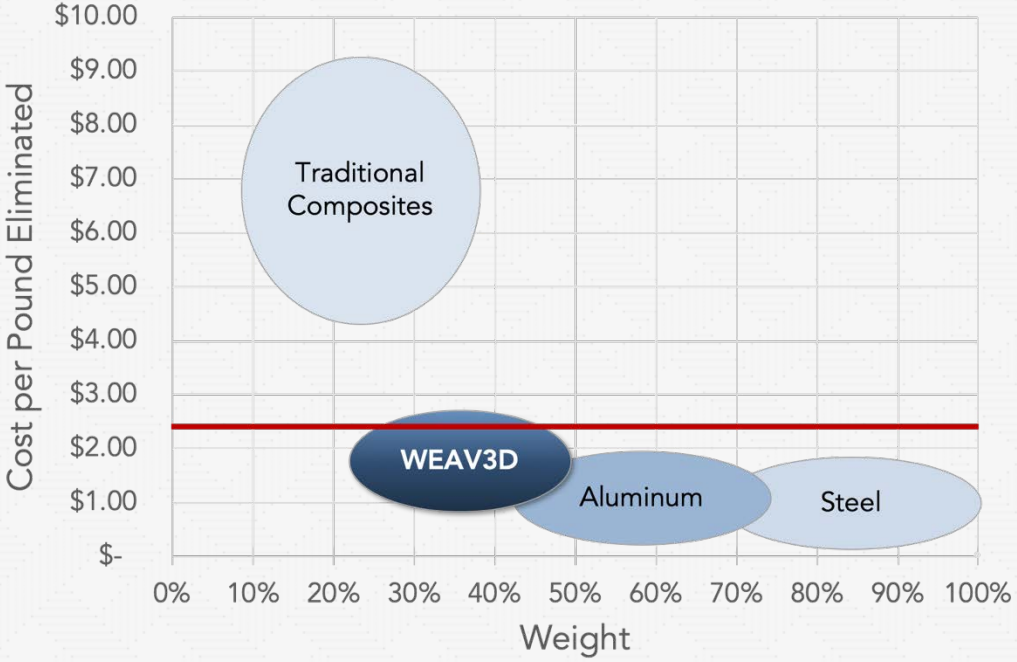
To learn more, get in touch with us at info@weav3d.com.

Appendix

WEAV3D Applications & Value Proposition

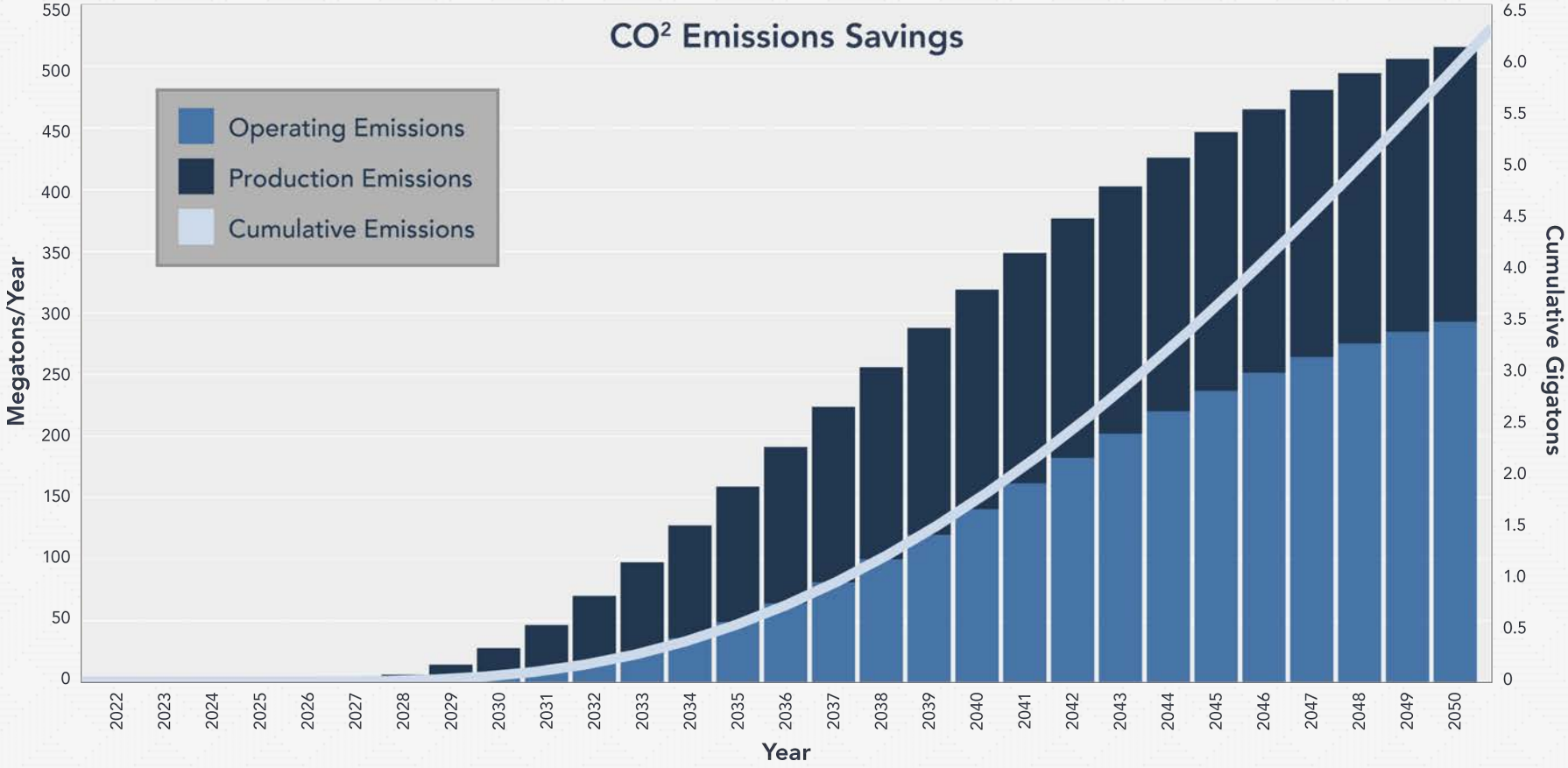
	Structural Metal Substitution	Structuralizing Molded Plastics	Composite Optimization
Example Application	Body in White	Interior Panels	SMC Covers
Weight Reduction	+++	++	++
Part Count Reduction	++	+++	+
Upcycling of Recycled Reinforcements	++	++	+
Expanded Use of Natural Fillers	+	+++	+

WEAV3D Value Proposition: *Automotive Door Panel*



WEAV3D approach achieves significant weight-reduction within $2.50 per pound-saved threshold

Market Adoption and Annual CO^2 Equivalent Impact Projections



WEAV3D Intellectual Property Overview

BACKGROUND IP
LICENSED FROM GEORGIA TECH

- COMPOSITE LATTICE
- 2 FORMING METHODS
- 3 MACHINES
- TRADE SECRETS

1 issued patent, 2 applications in prosecution

+

WEAV3D IP STRATEGY

- MACHINE IMPROVEMENTS
- DESIGN SOFTWARE
- LATTICE PLACEMENT TOOLING
- TRADE SECRETS
- LATTICE APPLICATIONS
- TRADEMARKS

New patent applications filed 12/2019 and 3/17/2020
WEAV3D® and Rebar for Plastics® are registered trademarks

Exclusive licensed background IP enables dominant IP portfolio for new technology platform.

WEAV3D Engagement Model Collaborative Design