# Carbon X Riddell

# Bringing Innovation to Head Protection



# Carbon is a global leader in digital manufacturing

#### **ABOUT**

Founded 2013

HQ in Silicon Valley

Global install base (North America, EU, Asia)

Over 400 employees

\$420M+ investment

300+ Patents & Patent Applications

#### **KEY INVESTORS**



























#### **BOARD MEMBERS**



Joseph DeSimone Co-Founder & CEO Carbon

Carbon



**Bobby Long** 





Jim Goetz artner General Partner apital Sequoia

Alan

Mulally





Adam Grosser

Managing Director
Silverlake KraftWerk

SILVERLAKE



Kullman
Past Chair,
CEO DuPont



Past CEO, Boeing Commercial Airplanes

Past CEO &

President, Ford



Group Board adidas

Eric



Liedtke
Head of Global
Brands and
Group Executive
Board Member
adidas



Fang Zhang
Founding
Partner
ARCHINA



Debbie Messemer
Past Managing Partner
KPMG





# Products designed to grow

**M2** 



M2d



**SMART PART WASHER** 



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DATA CENTRIC

DIGITAL THREAD
MAINTAINED
THROUGH EACH
UNIT

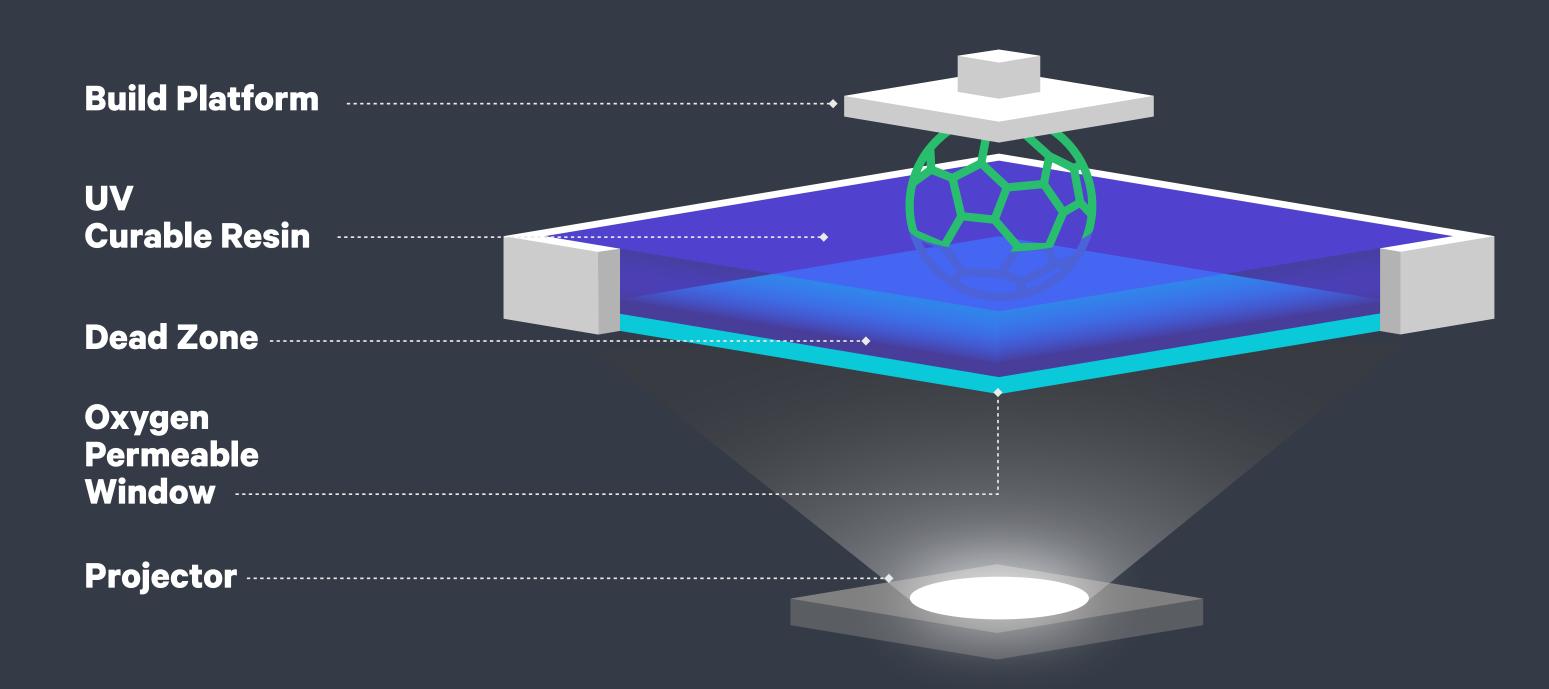
DESIGN FILES ARE
LOCAL AND CAN
BE ENCRYPTED

ANALYTICS &
BUSINESS
INTELLIGENCE

OTA
SOFTWARE
UPGRADES

# How Carbon DLS Works

"GROWING" HIGH QUALITY, PRODUCTION-READY PARTS





## **The Carbon Platform**

# A CONCIERGE APPROACH TO HELPING YOU MAKE THE BEST PRODUCTS IN THE WORLD AND BRING THEM TO MARKET TODAY



#### Digital Light Synthesis

New, state of the art 3D printing process



### **Dual-Cure Materials**

New 3D materials that were once un-imaginable



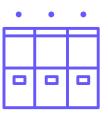
### **Modern Software**

Securely connected, infinitely upgradeable architecture



### **Products of the Future**

State of the art design tools that meet product requirements



## Full Factory Solutions

Optimized for vertical integration or partners



We help companies like

Riddell take decades of

data of what a product

should be and bring them

to launch in 6 months.

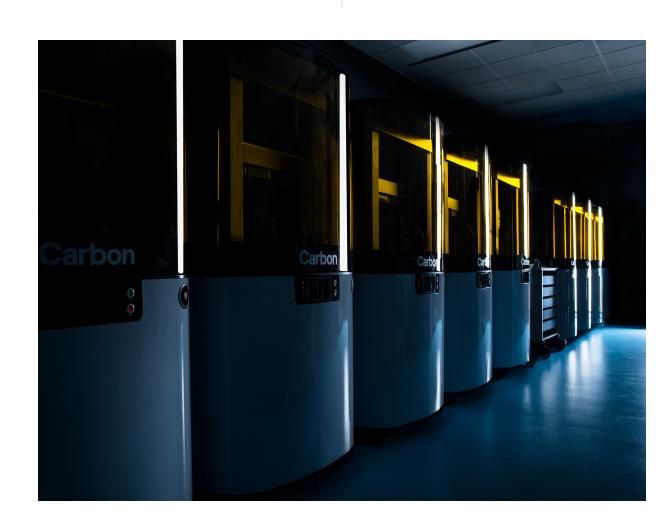
# **An Ideal Partnership**

VISION FOR INNOVATION

**ENGAGED AND TRANSPARENT TEAMS** 

DATA DRIVEN
DESIGNS

DIGITAL WORKFLOWS



Carbon



Riddell

# Next-gen Helmet Protection

#### **Custom Fit**

True fit to 3D scan Showcase features: player ID, team, signature



#### **Unprecedented Speed to Market**

Files to field in 6 months Thousands of cloud-based iterations Resin tuned for energy damping

#### **Superior Performance**

Digitally tuned to dissipate impacts and rotational forces

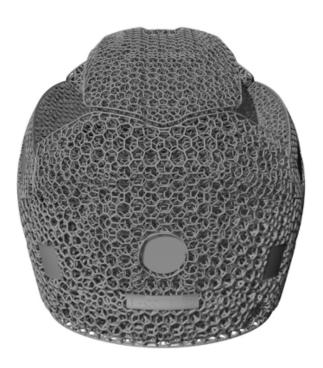


#### **Reduced Maintenance**

Fewer parts
Easier to clean and recondition

#### **Improved Comfort**

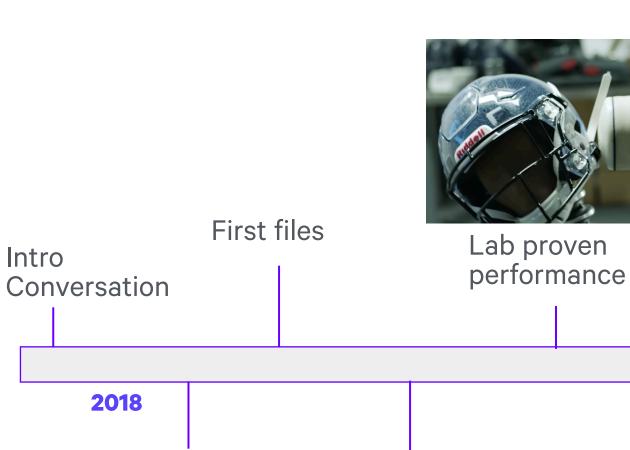
Same favorite shell and size Lighter weight



#### **Continuous Innovation**

Fast, high-quality iterations
Data-driven simulation and digital
thread

# Rapid Helmet Development





Design updates for comfort and performance



Super Bowl Launch

2019

Puck-level tests and benchmarking



Thousands of cloud-based lattice iterations



First helmets on-field

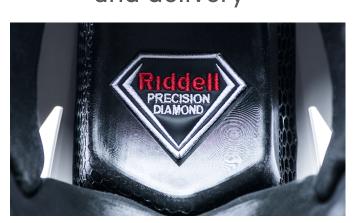


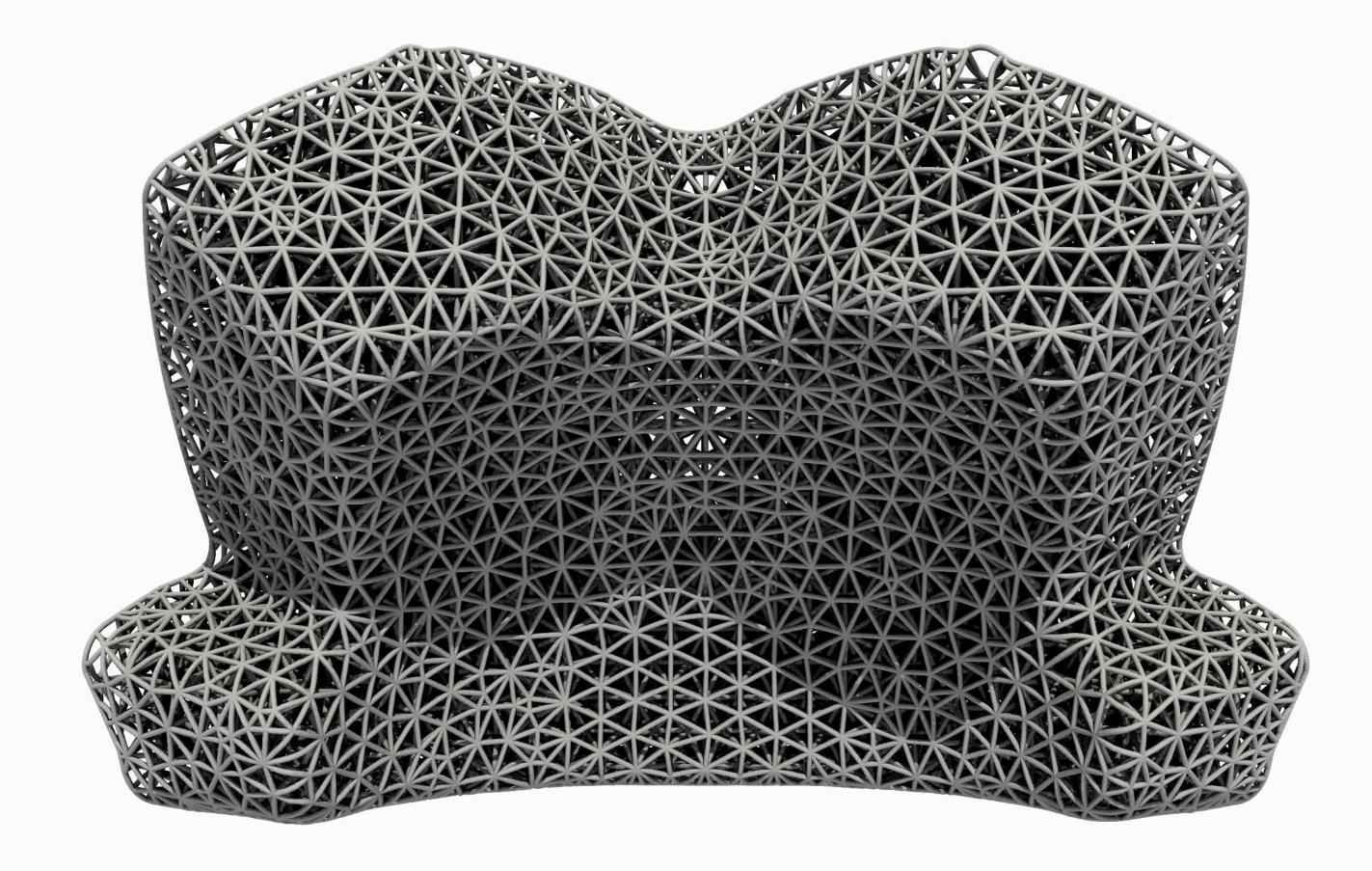


**NFL** Innovation Samples



Continuous improvement and delivery





## PRODUCTION WORKFLOW

**3D SCAN** 

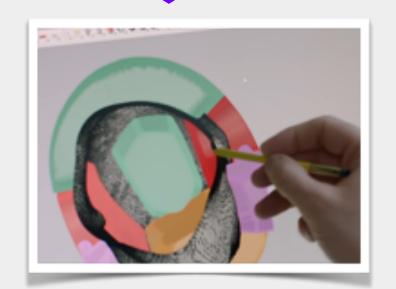


**ASSEMBLE** 



**Riddell**®

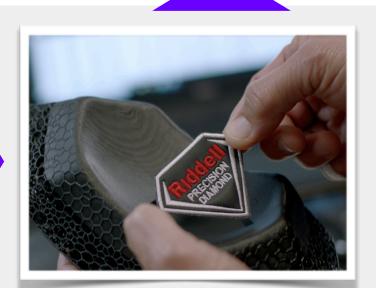
Carbon®



**CUSTOM DESIGN** 



**PRINT** 



QC

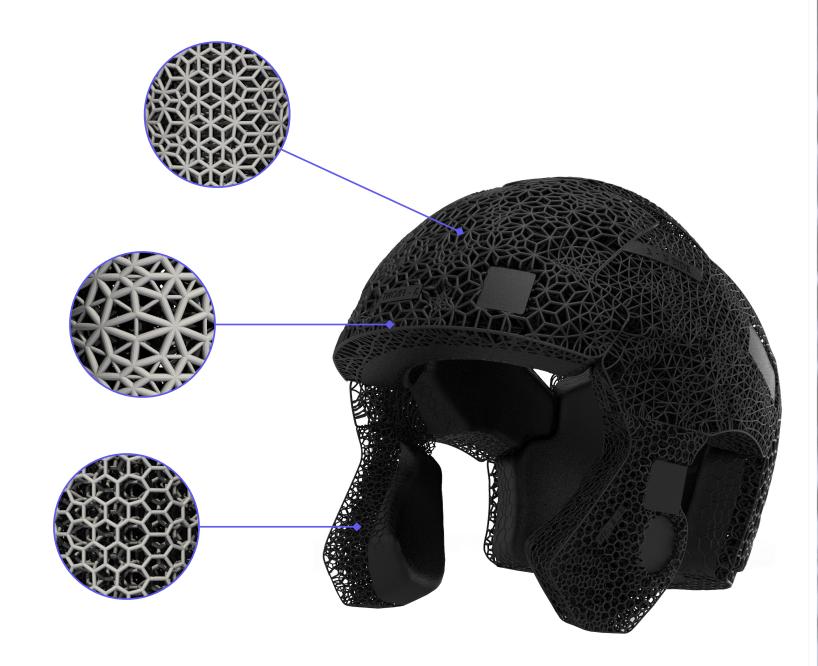
**3D SCAN** 

# Software Driven



#### **CUSTOM DESIGN**

# Digitally Tuned





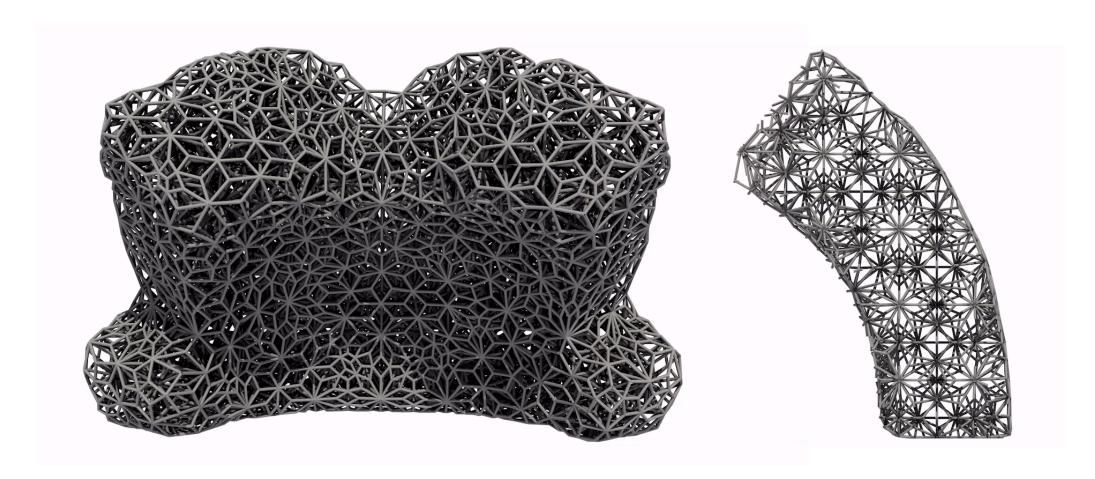
**PRINT ON L1** 

# HIGH VOLUME PRODUCTION



**QUALITY CONTROL** 

# Certified Performance



#### **POSITIVE FEEDBACK**

# We're just getting started!



"The fit is great, I feel more locked in than my normal PrecisionFit helmet, and my vision is the same" -lowa Player



"The precise fillets allow the pads to lock-in and conform better to the head, creating a more true fit for players"

-Riddell Engineer

































































# Carbon Production Solution

Scalable

Cost effective

End-to-end solution

All equipment

Game-changing software

World-class support and training

PLEASE STOP BY - SALON A, LOWER LEVEL, BOOTH #D2



### Carbon AMUG Sessions

#### **MONDAY**

Room: Williford C, Third Floor

**Time:** 4:30 p.m.

CARBON AND RIDDELL:
BRINGING INNOVATION TO
HEAD PROTECTION

SPEAKER:

Erika Berg

Head of Application Development, Carbon

#### **TUESDAY**

Room: Salon C

Time: 1:30 p.m.

DESIGN FOR DIGITAL LIGHT SYNTHESIS™ WORKSHOP

SPEAKERS:

Dee Kerr

Head of Education, Carbon

Beth Bernhardt

Manager of Curriculum Development, Carbon

#### WEDNESDAY

Room: Waldorf, Third Floor

**Time:** 3:00 p.m.

MOVING BEYOND
PROTOTYPING: CARBON
DIGITAL LIGHT SYNTHESIS™
AS A TOOL FOR
MEDICAL DEVICES

SPEAKERS:

Steve Pollack

Staff Scientist and Life Sciences Technical Lead, Carbon

Larry Monahan

Associate Director of Corporate Computer-Aided Engineering, BD

Blane Larson

VP of Development, Resolution Medical

#### THURSDAY

Room: Salon C

Times: 10:30 and 11:00 a.m.

PROCESS OVERVIEW

SPEAKER:

Dee Kerr

Head of Education, Carbon

# Carbon<sup>®</sup> SYNTHESIS

THE DIGITAL MANUFACTURING CONFERENCE

SEPTEMBER 29 - OCTOBER 1, 2020 SAN FRANCISCO BAY AREA

WWW.CARBON-SYNTHESIS.COM

# Carbon solves your toughest product challenges