

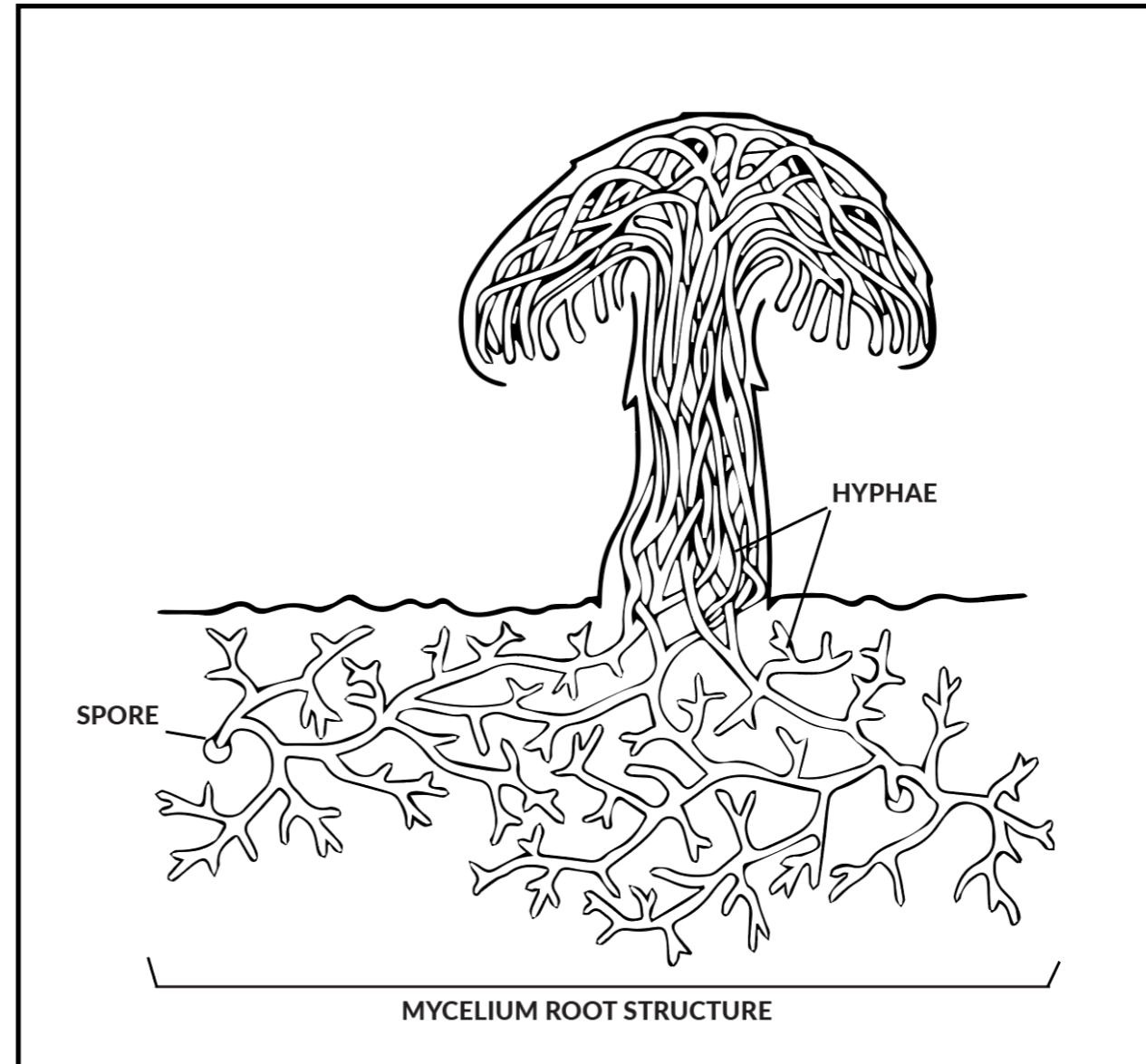
Core: LAB RESEARCH AND DEVELOPMENT

**Alessio Monti
December 2017**

**RESEARCH
PROBLEM**

**ENGINEER
SOLUTION**

**DEVELOP
PRODUCT**



LIGHTWEIGHT, DURABLE

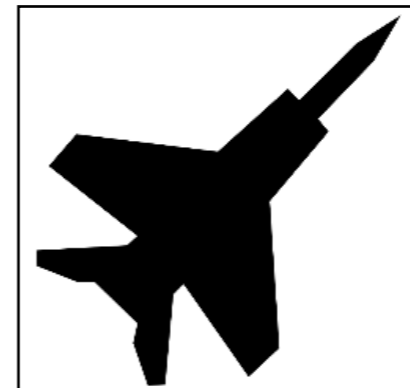
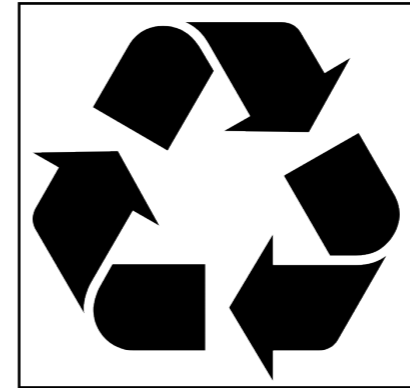
GENETICALLY MODIFIABLE

SHOCK ABSORBENT

RECYCLABLE, SUSTAINABLE

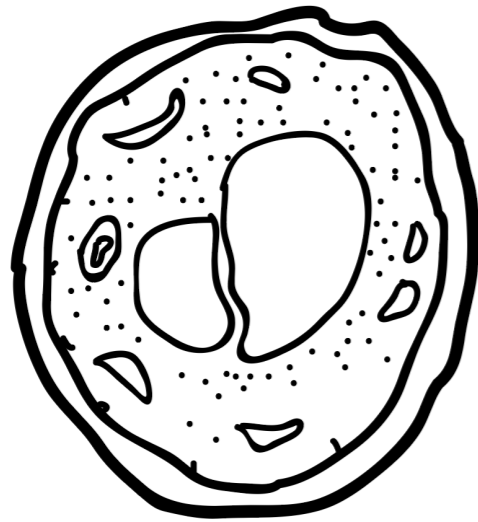
GROWS FROM A MOLD

IN UNDER 3 WEEKS



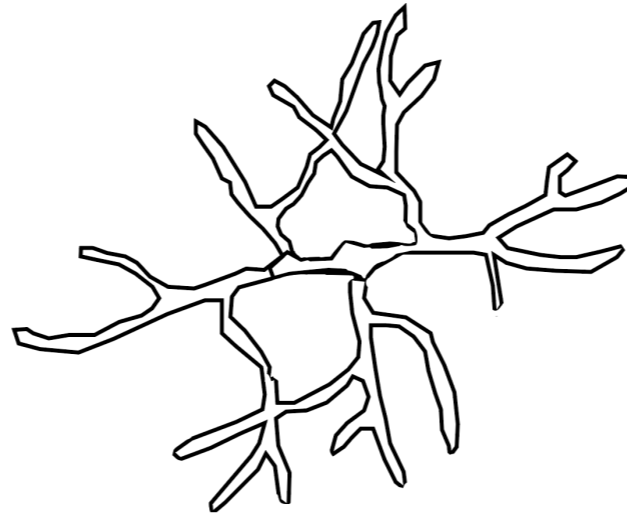
BIOMATERIAL

**MYCELIUM
CELL**



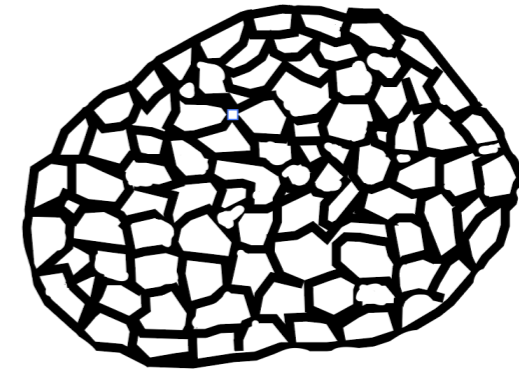
UNICELLULAR THALLUS

**NATURAL
FORMATION**



SEPTATED HYPHAE

**SEALTECH
FORMATION**



SCLEROTIUM

BASELINE FOR SUCCESS

**NATURALLY
SOURCED**

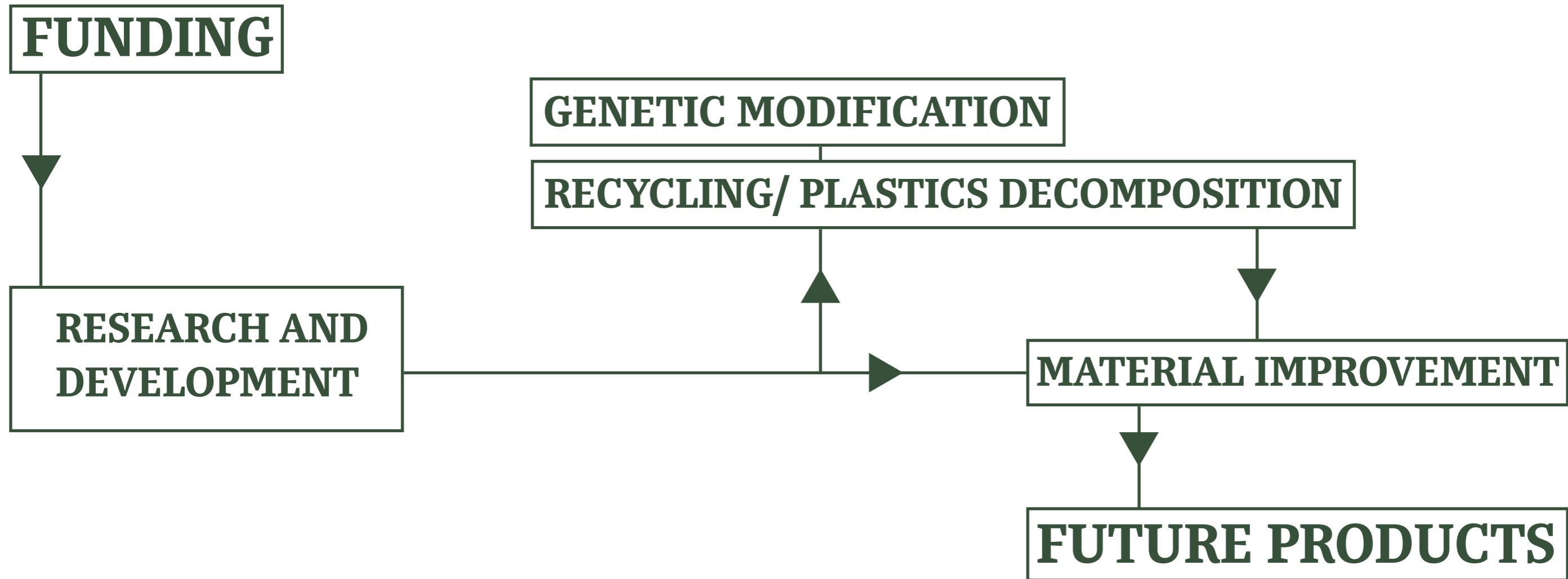
**SUSTAINABLY
DEVELOPED**

**SOCIALLY
CONSCIOUS**

“The best minds of my generation are thinking about how to make people click ads”

Jeff Hammerbacher

STRATEGY



TEAM

ALESSIO MONTI

**PARSONS THE
NEW SCHOOL**

**DESIGN AND
TECHNOLOGY**

MOSES FREIH

**NEW YORK
UNIVERSITY**

**SCHOOL OF
MEDICINE**

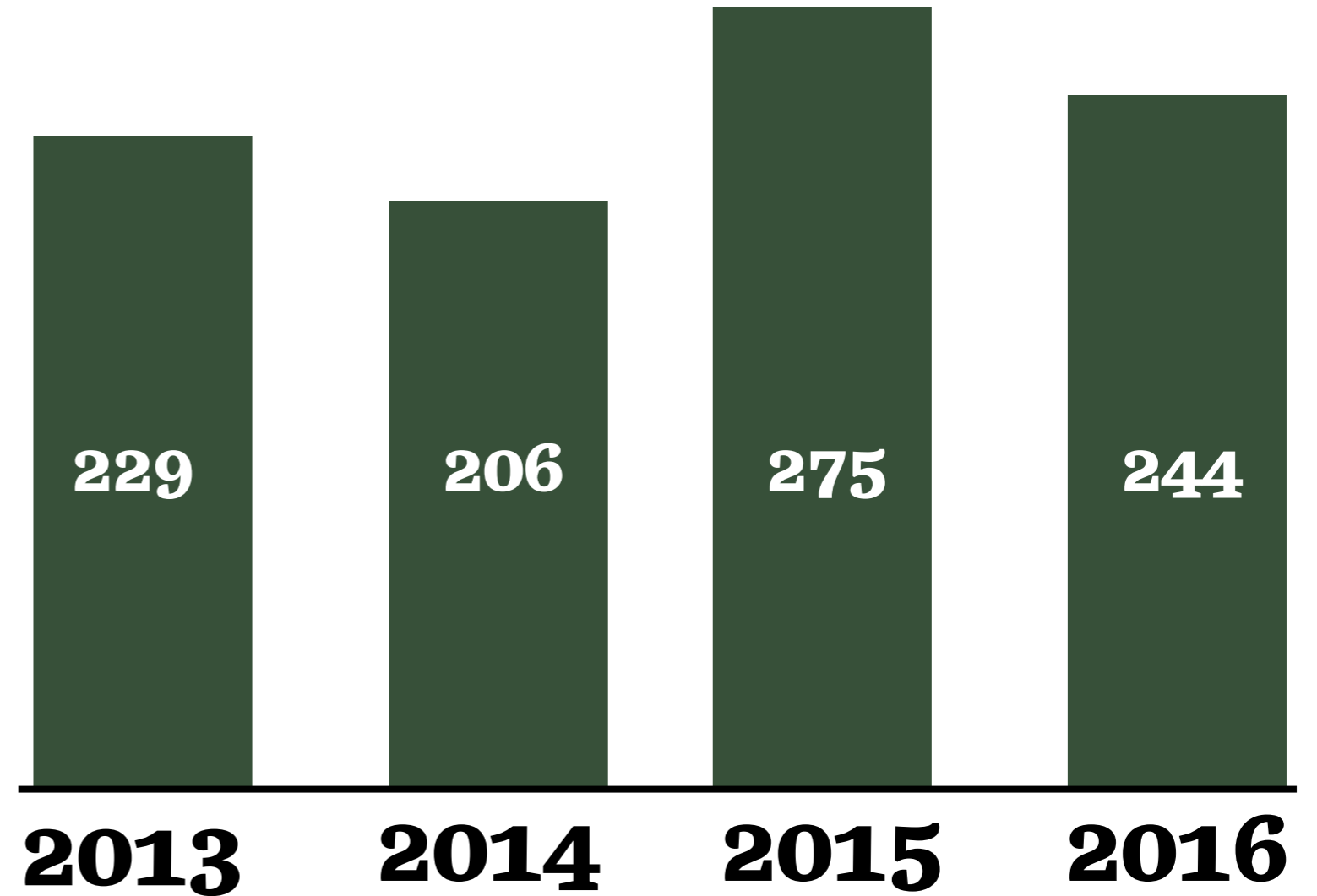
YVONNE MA

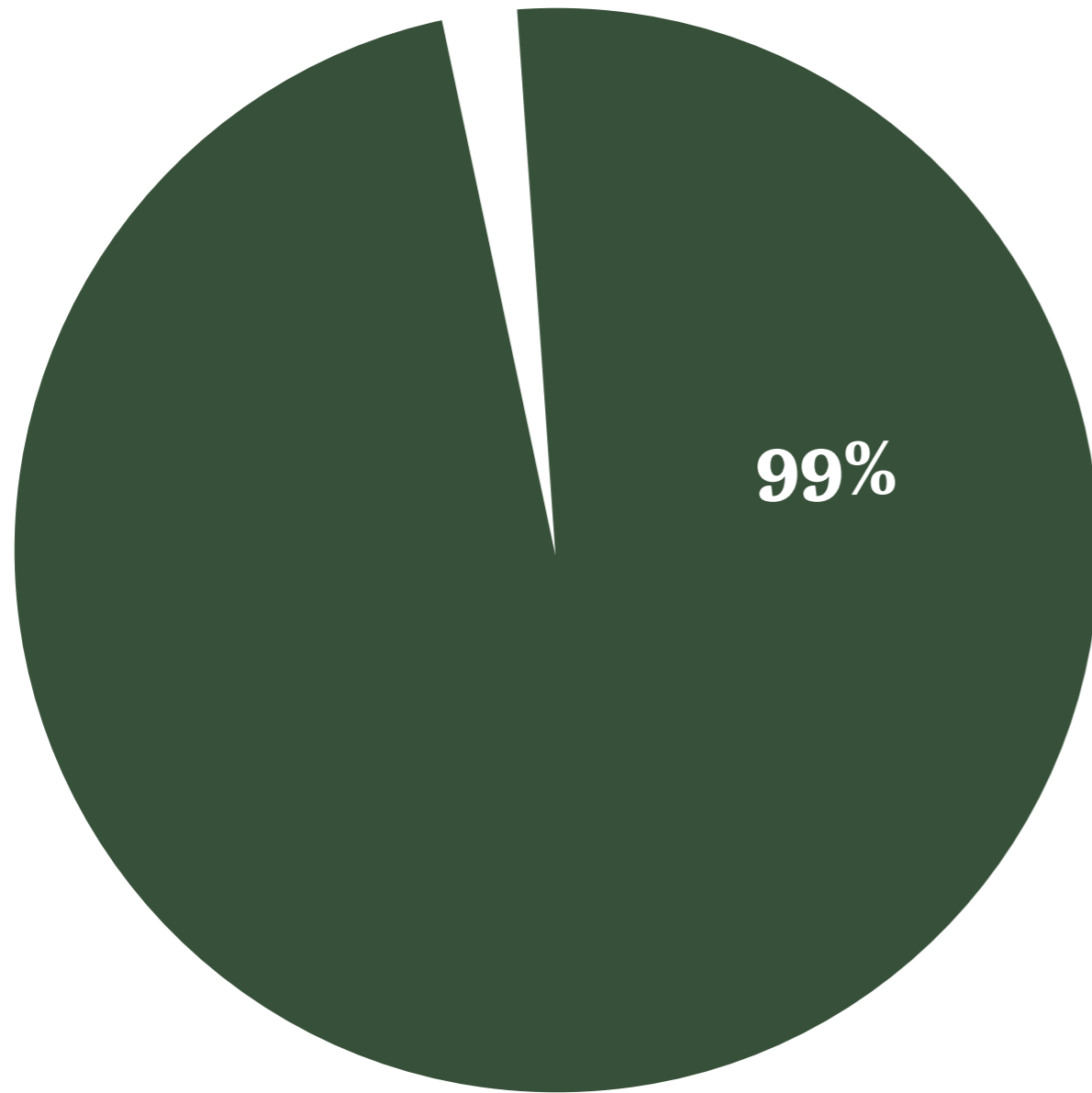
**PARSONS THE
NEW SCHOOL**

**BUSINESS
MANAGEMENT**

PROBLEM

**Medically Diagnosed
Concussions NFL
Seasons 2013-2016**





**110/111 proved positive
for Cranial Traumatic
Encephalopathy**

“A pledge of an additional \$100 million in support for independent medical research and engineering advancements.”

NFL Commisioner Roger Goodell

1,786,000 high school football
related concussions reported in
2012

high school football accounts for
47 percent of all reported sports
concussions.

1,080,693 HS football players

**0.08 percent of senior players will
be drafted by an NFL team.**

**That's less than 864 kids across
the nation.**

COMPETITION: NFL



VICIS ZERO1

TOTAL FUNDING: 28.5 MILLION

EMPLOYEES: 50

RANKED #1 IN 2017 NFL/NFLPA HELMET

PERFORMANCE TESTING

COST: \$1,500

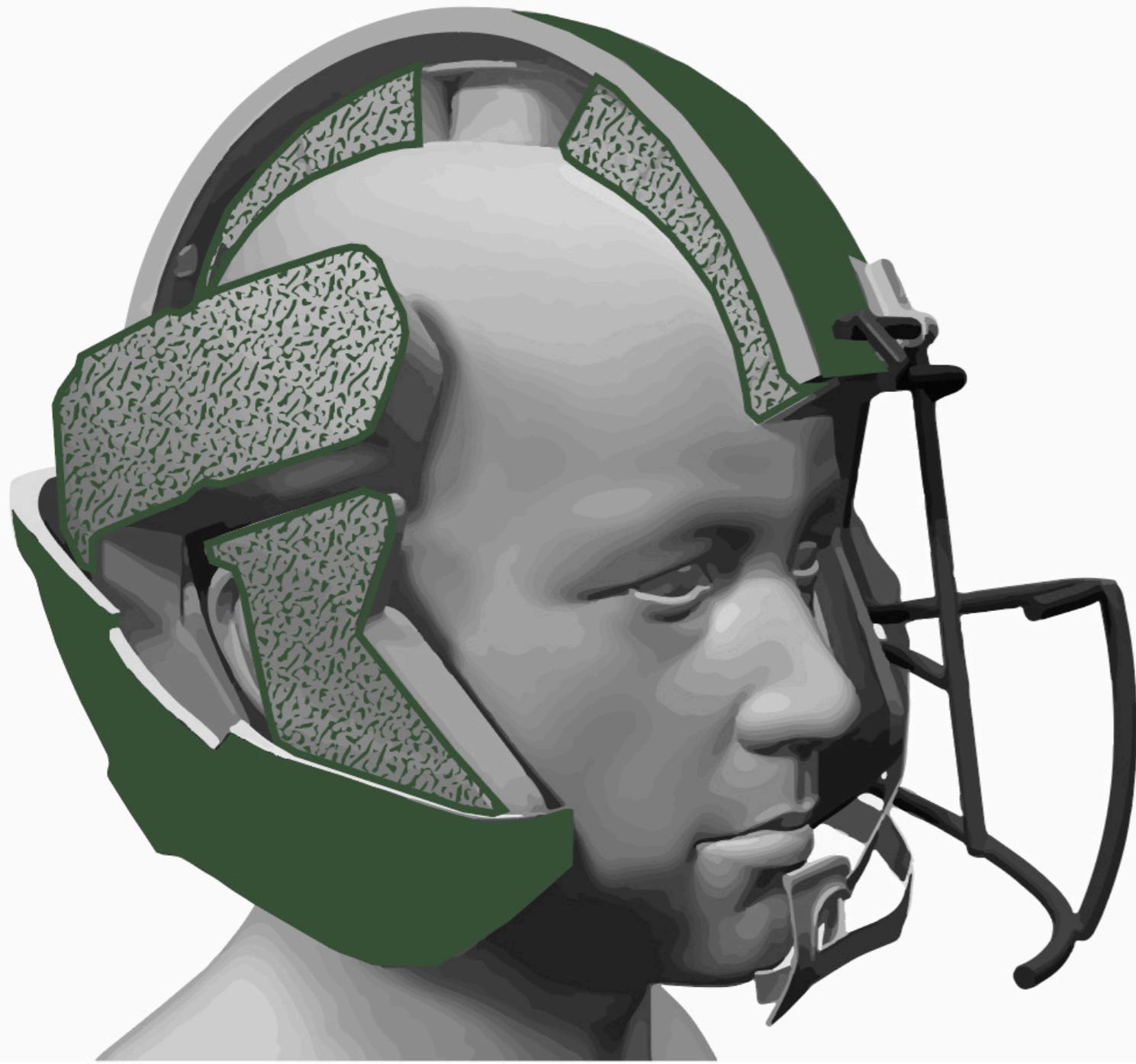
COMPETITION: HS



**RIDDELL SPEEDFLEX
60% MARKET SHARE**

COST: \$409.99

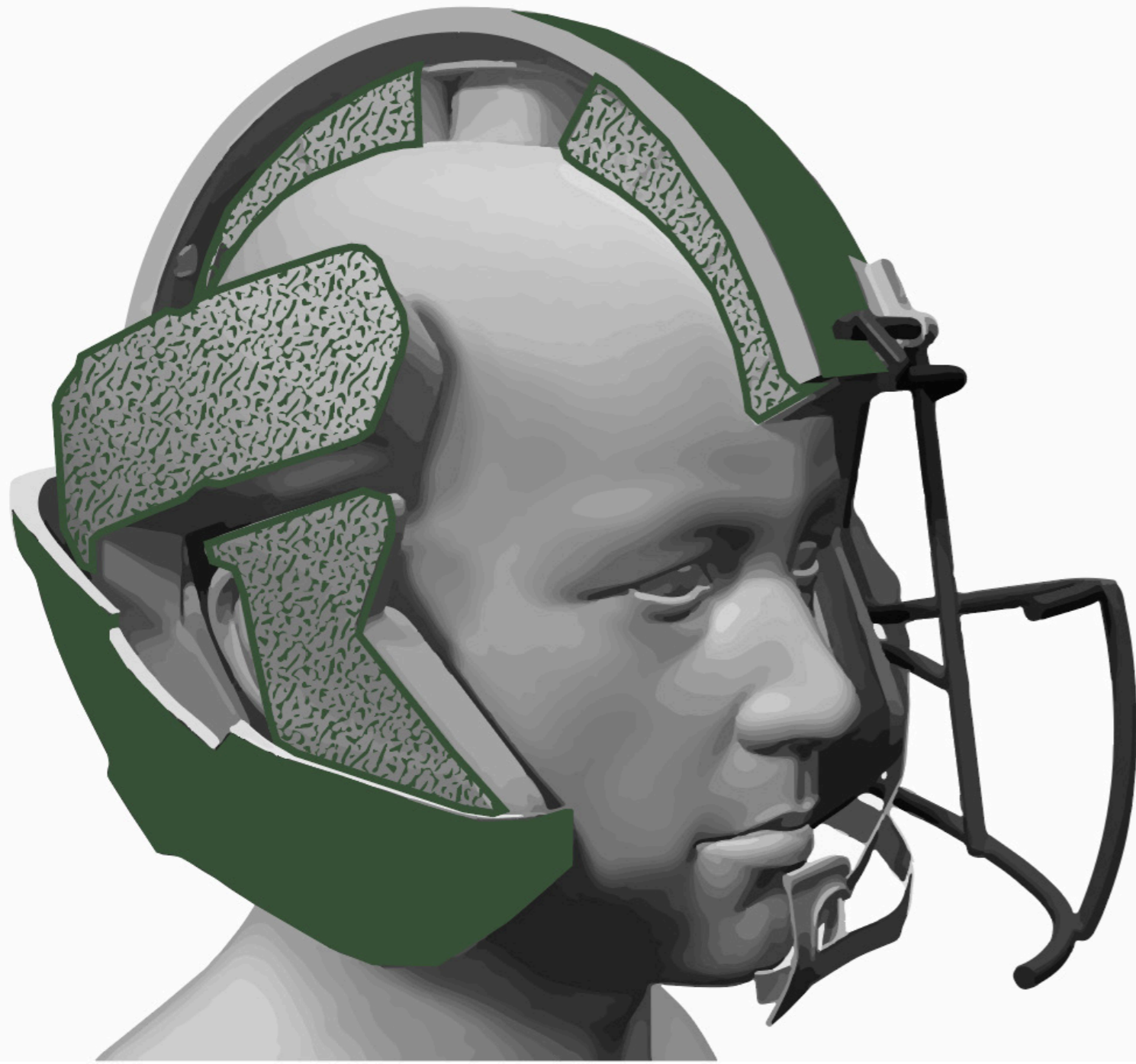
THE PRODUCT



**SOFT MYCELIUM INNER
HARD MYCELIUM OUTER
POLYCARBONATE SHELL**

**PERFECT FIT:
SCAN OF A PLAYER'S
HEAD SHAPES MOLD**

THE CHARACTERISTICS



**HIGH TOLERANCE FOR
SHOCK ABSORPTION
COST
EFFECTIVE
SUSTAINABLE**

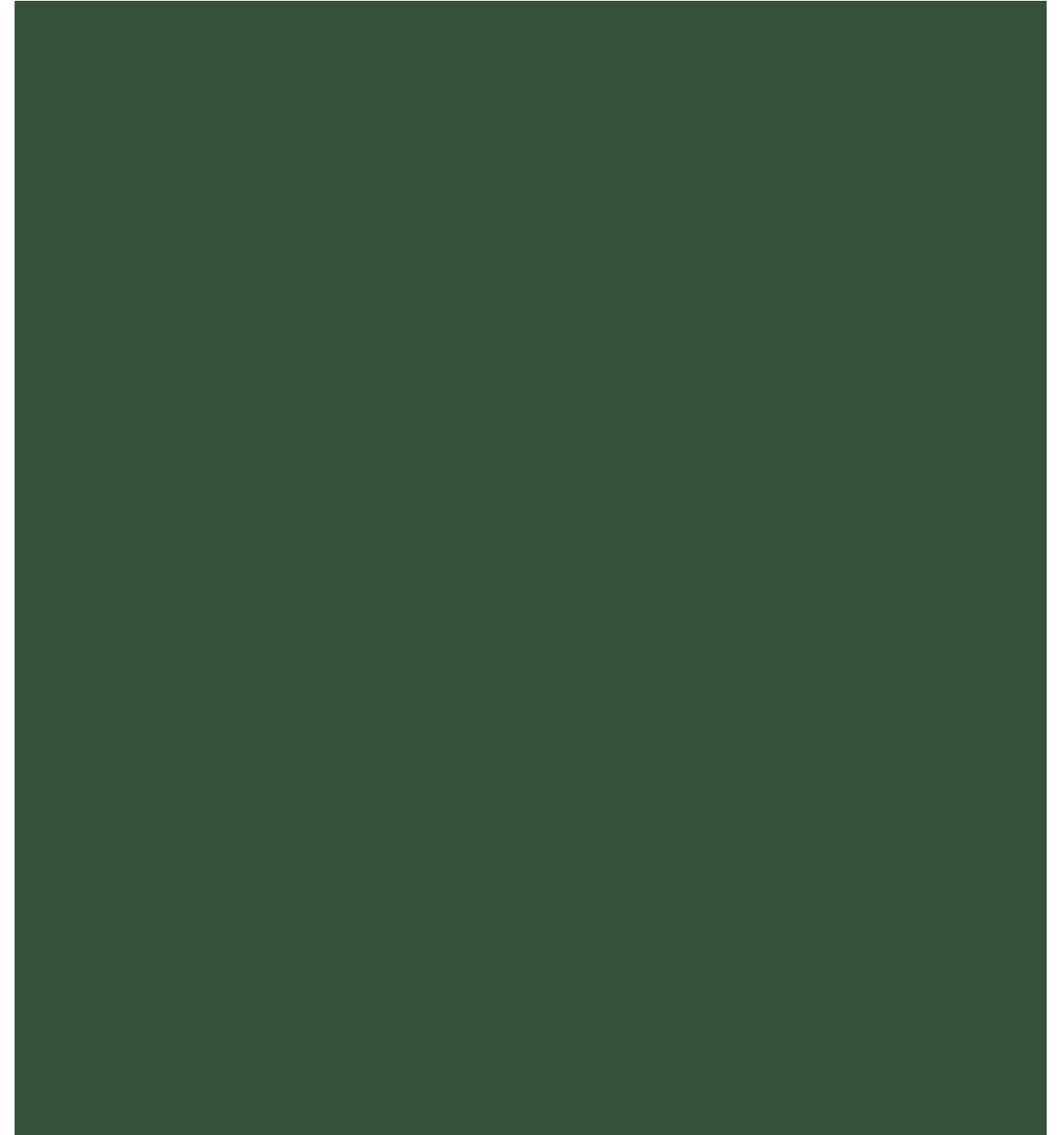
PRICE POINT: \$335

**DOMINIC
DIMEGLIO**

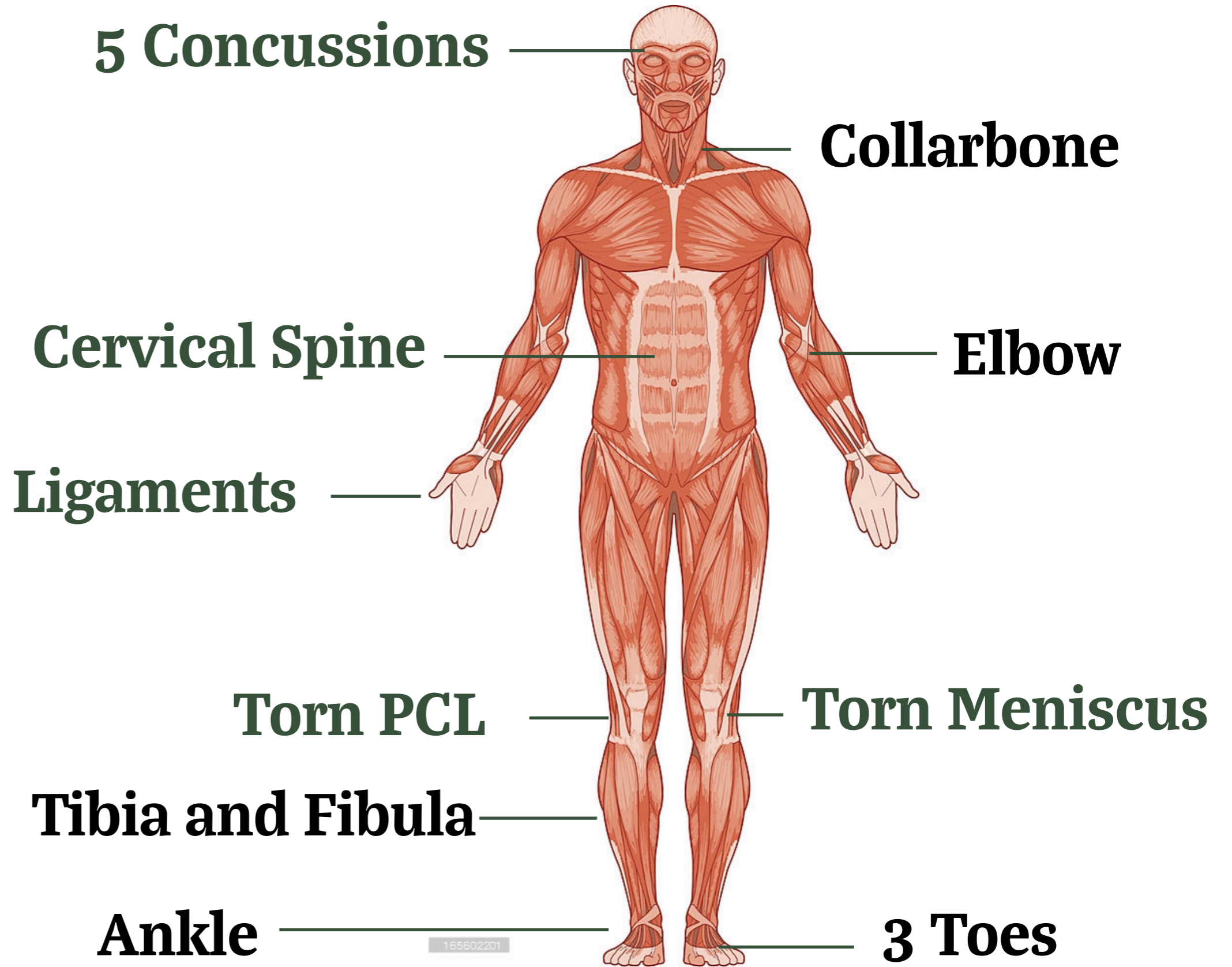
SACHEM EAST HIGH SCHOOL

RUNNINGBACK, CORNERBACK

PLAYED FOR 13 YEARS



INJURIES
(Black: Breaks)



OUTREACH STRATEGY:

COLLECT DATA:

Player Interview
HUDL videos
Family Interviews
Coach interviews

VIDEO:

1x Player

PUBLISH VIDEOS

Website database

OUTCOME:

SUPPORT GROUP INFRASTRUCTURE

LOYALTY THROUGH CUSTOMER DEVOTION

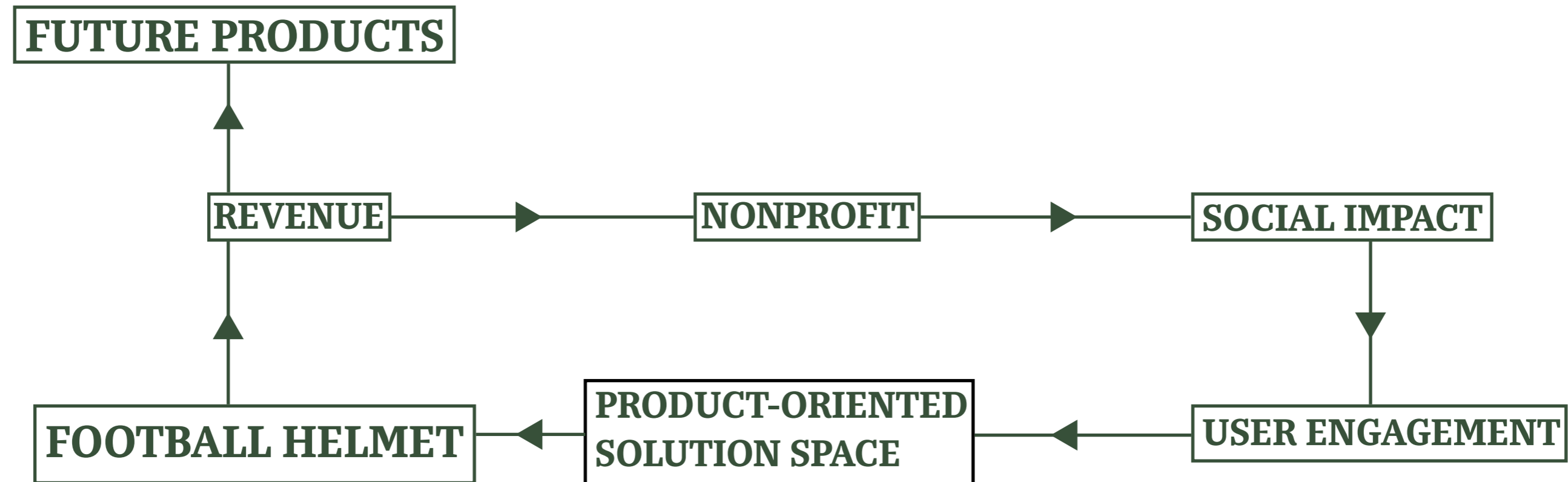
HIGH SCHOOL ATHLETES AS FACE OF THE BRAND

GOALS:

Start a conversation- Is this attitude sustainable ?

Support groups- Athletes can communicate with each other

Financial support- Donation of padding, helmets, medical care



BASIC OPERATING COST: 1 year

PCB:

\$2.3/kg

MYCELIUM:

\$118/kg

SOLUTIONS:

\$650/L

LABORATORY SPACE:

\$75/sqft (1,000 needed)

TOTAL R&D FUNDING

\$230,000

TOTAL MATERIAL COST

\$89/KG

THE MARKET

(ASSUMING 100% ENGAGEMENT)

REVENUE: \$362,032,155

HELMET PRICE * PLAYER

HELMET COST: \$221,542,065

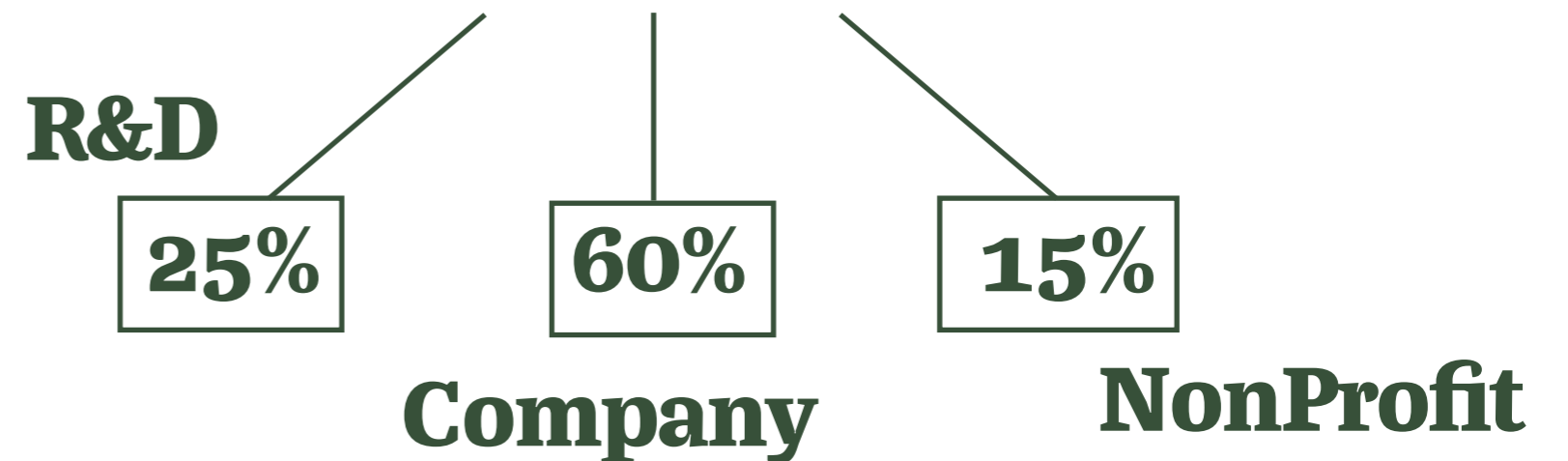
\$205 PER HELMET

PROFIT: \$140,490,090

HELMET SALE: \$335

HELMET COST: \$205

PROFIT: \$130 x helmet



**NATURALLY
SOURCED**

**SUSTAINABLY
DEVELOPED**

**SOCIALLY
CONSCIOUS**

