The Bridge-1

Problems:

Current fire helmet technology is outdated and firefighters are not as safe as they could be.

Solution:

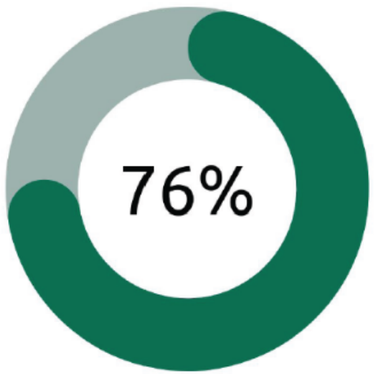
A fire helmet that incorporates newer technology to solve current struggles a firefighter faces

Research and Data

Fire helmet from 1821:

Fire helmet from 2021:

- 76% of firefighters report at least one head injury in their lifetime



- 38% of on-duty firefighter injuries in 2022 were from contact/impacts with an object

Data from NFPA

The Mission:

1. Integrate the SCBA with the helmet to reduce suit up time

2. Reduce head injuries and smoke exposure

3. Address common pain points such as hearing and communication

4. Introduce technology that will better equip a firefighter save lives

5. Embrace the long lasting tradition that fire-fighters hold, but push forward with a design that will protect them better (Something they would

Sketching Iterations

Final Sketch

Rendered Sketch Ideation

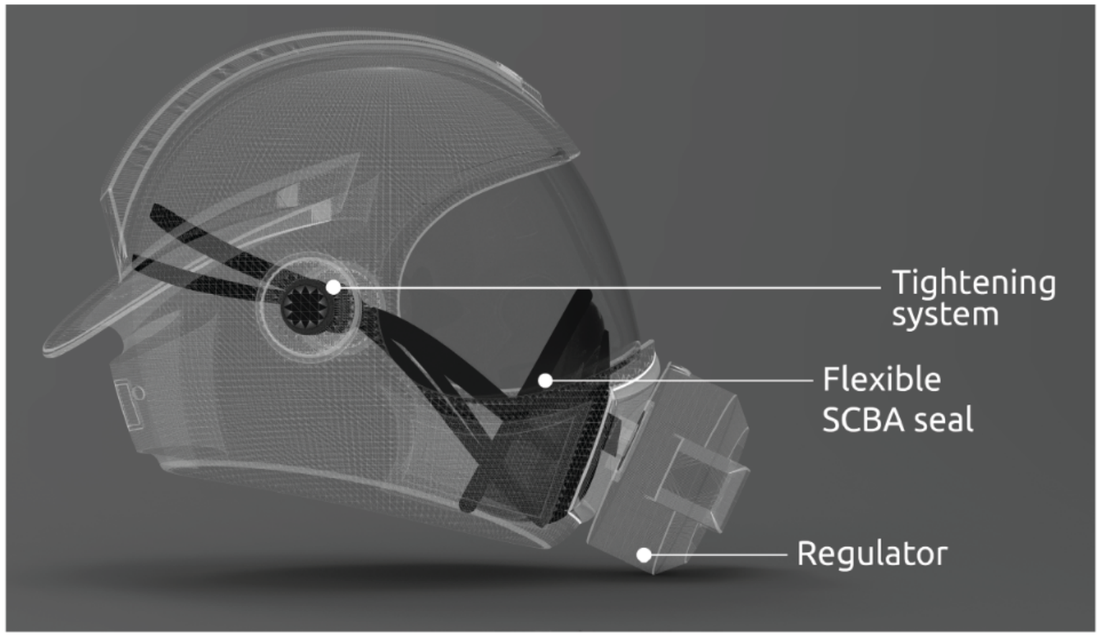
- Design decisions
- More research
- Military inspiration

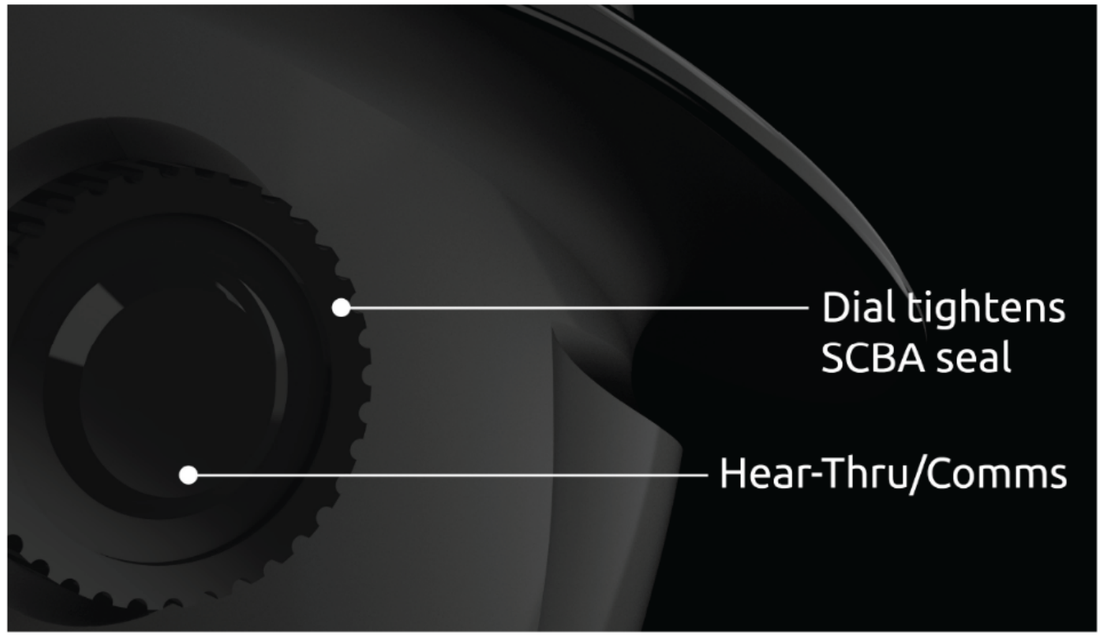
- Solidworks Iterations
- Printed off and critiqued

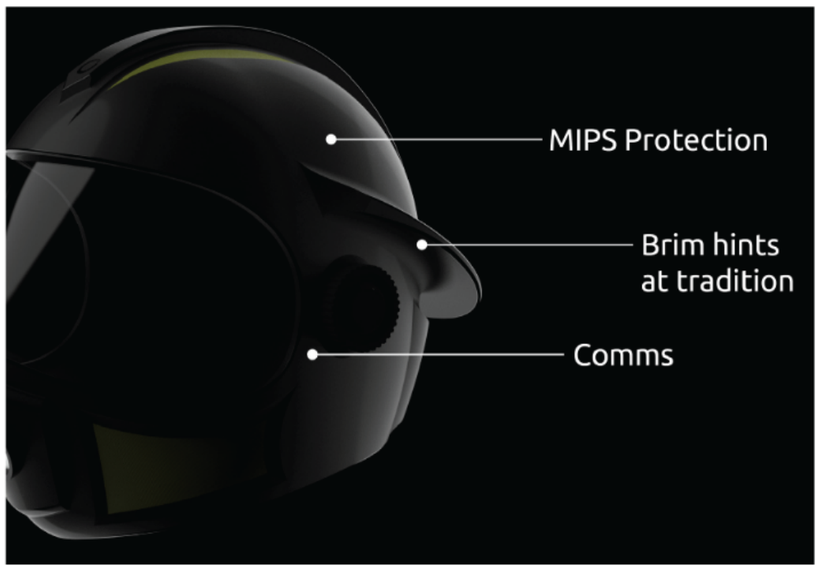
- Final Helmet Form

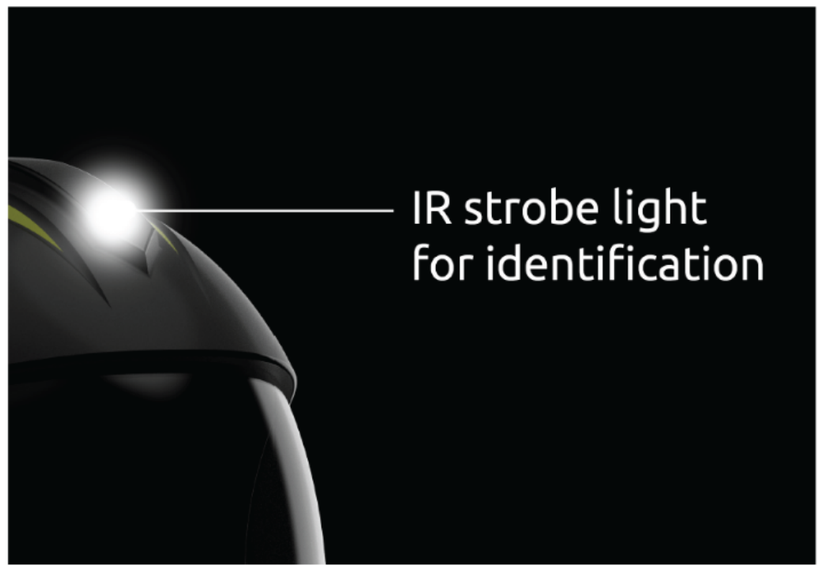
The Bridge-1

- Integrated SCBA
- More protective form
- Brim for tradition
- MIPS technology
- Comms
- Hear-Thru/Noise Canceling
- Bullard’s fiberglass composite lightweight material
- IR strobe
- Heat Sensor


Tightening system
Flexible SCBA seal
Regulator


Dial tightens SCBA seal
Hear-Thru/Comms


MIPS Protection
Brim hints at tradition
Comms


IR strobe light for identification

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FEATURES & BENEFITS

BLEND OF COMFORT AND PROTECTION

Full head protection for smoke and angled impacts. The adjustable headband and new MIPS technology allows for a snug and comfortable fit to the head.

INCORPORATES NEW TECHNOLOGY

Several technologies such as an SCBA seal, Comms, Noise Cancelation/Hear-Thru, IR strobe light, and a heat sensor are all being introduced to the field.

A HINT OF TRADITION

The form languages embraces the traditional fire helmet with the brim and top ridge, while providing balance and extra protection.


The Bridge -1
Bridging modern technology and tradition