CASE STUDY

CREATING **ADAPTED CLIPS** WITH 3D PRINTING TO STAY **COMPETITIVE** AND **INCREASE SUSTAINABILITY**

sculpteo X LUNAAR

www.lunaar.fr

Photo source: RealWear.com

CHALLENGES

• 1

Create an adaptable clip to fix connected glasses to most safety helmets used by Lunaar customers.

• 2

Stay competitive while developing customized solutions.

• 3

Implement more sustainability in the project.

Main information

Company	Lunaar
Industry	Digital
Product	Clips to fix connected glasses on safety helmets
Technology	Selective Laser Sintering
Material	Ultrasint® PA11
Finishing options	Raw finish
Challenge	Creating an adaptable clip to fix connected glasses to most safety helmets used by their customers while staying competitive and adding sustainability to the project.

ABOUT LUNAAR:

LUNAAR is an expert in augmented collaboration based in France. They support companies in their digital transformation thanks to **Assisted & Augmented Reality (AR)**, in worldwide deployments.

COLLABORATION:

They are one of the few gold partners of **RealWear**, which is a leader in the AR market, designing robust and reliable smart glasses for all contexts, even the most hostile.
Lunaar allows collaboration between frontline workers and experts anywhere in the world.

LUNAAR'S SOLUTION:

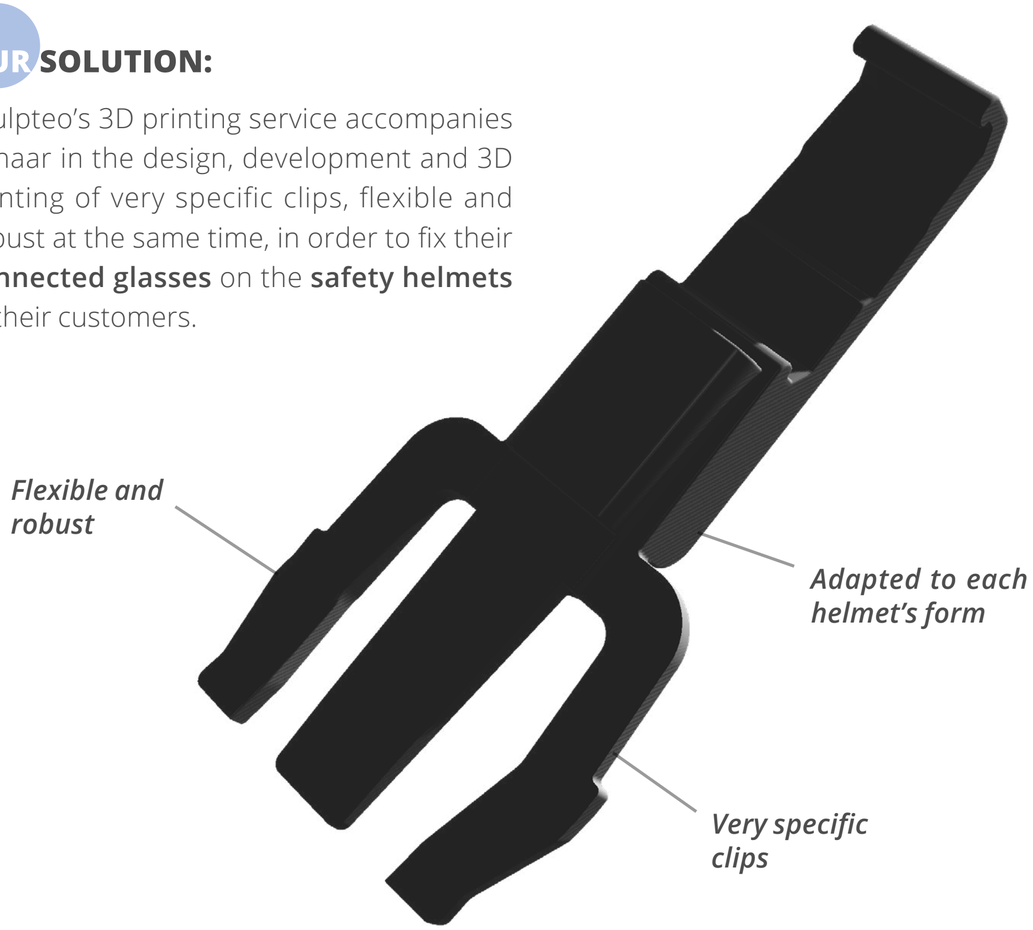
The product offered by Lunaar allows customers to have **visual assistance** during critical operations, like machine maintenance, training, quality control and many more operations. This solution provides a visual interface and connects with a remote agent that can help in the accomplishment of certain **critical tasks**.

Thanks to this product, Lunaar is delivering a solution increasing the **sustainability** of their clients operations by allowing simple remote intervention. This can **cut down** on **carbon emissions** and enable a reduction of resources consumed during transportation of the assist team. On many occasions, Lunaar needs a solution to fix their connected glasses to the safety helmets of their customers.

Assistance | Collaboration | Digitalized instruction | Quality control

OUR SOLUTION:

Sculpteo's 3D printing service accompanies Lunaar in the design, development and 3D printing of very specific clips, flexible and robust at the same time, in order to fix their **connected glasses** on the **safety helmets** of their customers.



OUR DESIGN:

Instead of relying on "off-the-shelf" solutions, the flexibility provided by 3D printing enables designs to be **exactly adjusted** to the real circumstances. Since you are no longer limited to using conventional components, the design can be **adjusted to the environment** in which it will be used.

DESIGN INNOVATION:

Lunaar is a reseller (Gold Partners) of RealWear products, a product that has been designed to fit most **PPE (Personal Protective Equipment)**, but not to all of them!
These smart glasses are not compatible with all the helmets on the markets, because helmet producers have their own designs. 3D printing gave the opportunity to Lunaar to develop several connectors capable of **adjusting to most helmets**, which opened new possibilities for them and helped to sell their smart glasses to many more customers.

Source : Honeywell Helmet, RealWear.com

Source : MSA Helmet, RealWear.com

Source : 3M Helmet, RealWear.com

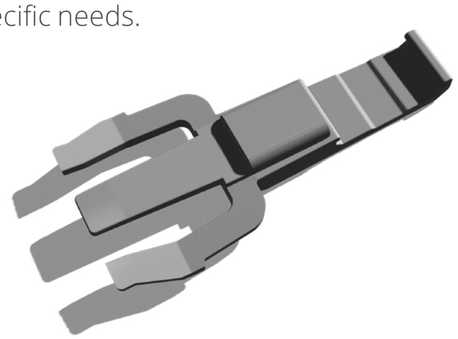
? DID YOU KNOW?

89% 3D PRINT

of 3D printing users choose their material based on specific technical properties.

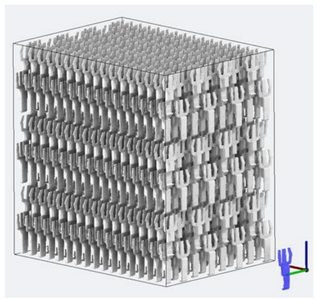
Source: The State of 3D printing 2022

Whereas using traditional manufacturing techniques makes customization most of the time impossible, time consuming and generally reserved for only the most exclusive clients, with 3D printing it is cost efficient and presents an added value for customers with specific needs.



WHY 3D PRINTING?

By changing the 3D model, additive manufacturing's versatility allows to adjust the products to the needs of the customers. In this case, additive manufacturing allows Lunaar to manufacture adapted connections for a **reasonable price**. With a **competitive pricing for small series production**, additive manufacturing is ideal to produce batches of up to **500** connectors for certain customers that were equipped with particular helmets.



Nesting of the clip in a 3D printing batch

Thanks to the attractive prices of 3D printing and the flexibility of Sculpteo, Lunaar provides different references to a wide variety of helmet brands, in order to be as reactive as possible for their customers and gain in competitiveness.

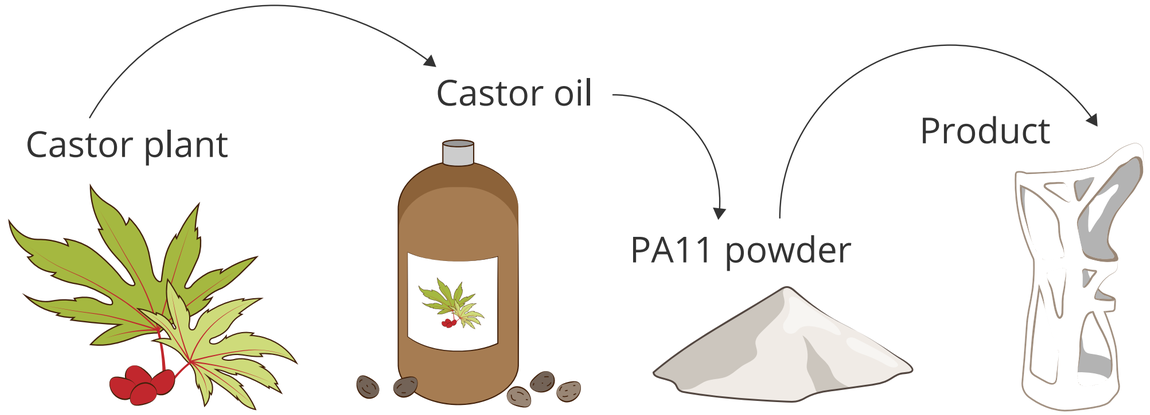
DID YOU KNOW?

89%

3D PRINT

of 3D printing users see 3D printing adopting as a strength or a competitive advantage.

Source: State of 3D printing 2022

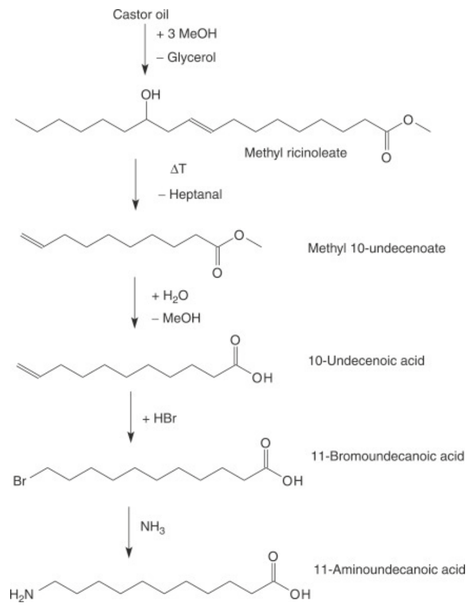


SUSTAINABLE MATERIAL:

The material used to develop these clips is a material based on 100% renewable biomass sources, Ultrasint® PA11. Ultrasint PA11 is a **bio-derived** powder with high toughness. An important feature of this material is that it provides good ductility and impact strength for numerous applications. For any professional looking for a material resistant to load and mechanical stress.
Ultrasint® PA11 is an excellent alternative to Nylon PA12, this material is based on 100% **renewable** biomass sources. The Castor seed is extracted from the castor plant to make oil. and the oil is then converted into the monomer (11-aminoundecanoic acid), which is finally polymerized into Polyamide 11.

With this digitalization of operations, Lunaar is helping their clients to gain in sustainability by removing the need of printing many complex procedures, and more importantly removing the need of traveling for experts around the globe.

Lunaar needed a material allowing flexibility and robustness to manufacture these connections. The flexibility and a high elongation of PA11 makes it the best material to design clips, because they can bend many times, without breaking.



CLIENT QUOTE ABOUT US :

“Sculpteo has provided a very pleasant experience, providing reactivity, and listening to our needs.”

Frédéric TAVARES CEO @LUNAAR

LUNAAR

www.lunaar.fr

Address:
Sculpteo
10 Rue Auguste Perret
94800 Villejuif, France

Website
www.sculpteo.com

Phone number:
+33 1 83 64 11 22

sculpteo