RE CREATE

From Waste to Worth: Reclaimed Composite Materials for Additive Manufacturing Innovation

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Problem

- Traditional manufacturing (TM) processes are rigid, costly and produce significant waste (machining, molding)
- Additive manufacturing (AM) can offer customized solutions and negligible waste, but often relies on virgin and fossil–derived materials
- Linear Material Economy: Current systems follow a take-make-dispose model, failing to reclaim value from used materials
- End-of-Life (EOL) Challenges: Composite materials are hard to recycle due to their complex makeup, leading to landfill accumulation/incineration.

🚀 **The Way Forward**

- Combine AM with sustainable, recyclable materials (glass/carbon fibers, rPLA, rPA)
- Enable design freedom, agility and circularity
- Partner with experts to drive viable, scalable innovation

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Customer segments that can benefit from

- Manufacturers looking to shift from TM to sustainable AM
- OEMs in aerospace, marine, automotive, defense and sports equipment requiring lightweight, high-performance components.
- Material suppliers & recyclers looking to valorize waste through high-value applications.
- Research & innovation hubs partnering on circular prototyping
- Eco-conscious brands (e.g., lifestyle, furniture, design) supporting circularity and aesthetics
- Public sector and EU projects consortia, promoting circular strategies

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USP & UVP

➢ **Unique Selling Proposition (USP):**

end-to-end service, that combines :

- high-performance, custom circular composite materials
- DfAM expertise and
- application-specific prototyping

helping manufacturers transition from TM to sustainable AM

➢ **Unique Value Proposition (UVP):**

• Material innovation: Blending reclaimed fibers with recyclable or bio-based matrices, aligning with the 9R strategy

• Design flexibility for the production of functional materials of complex geometries

• Application-specific tailored consulting: Helping clients redesign parts, via AM process optimization

• Embedded lifecycle/material traceability, (e.g. using RFID tag materials passports)

• Support for ESG integration of companies

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Solution

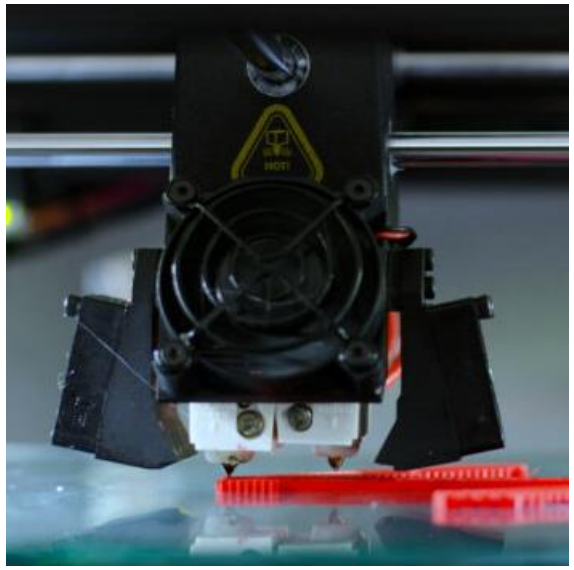
A customized service offering:

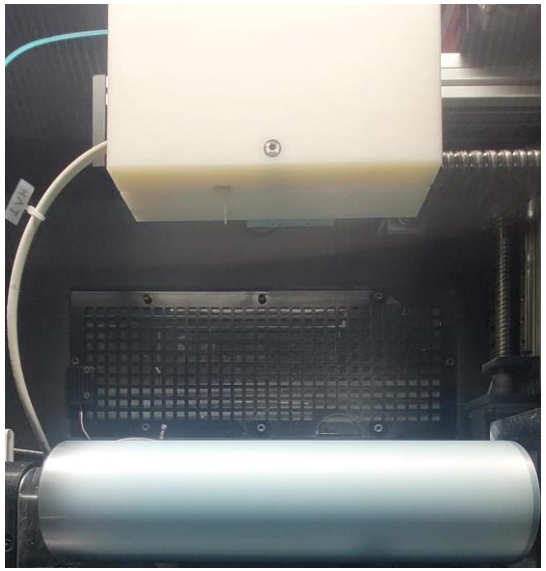
✓ **Materials innovation**:
- Tailored AM feedstocks using circular carbon/glass fibers and polymers
- Pellets, filaments and custom blends for FFF, FGF, VPP

✓ **Design & Engineering services**:
- Transition existing parts or concepts to AM workflows.
- Printability checks, lightweighting, topology optimization

✓ **Pilot Manufacturing & Prototyping**:
- On demand custom parts using in-house AM systems
- Short-run production with sustainable composite materials

✓ **Sustainability integration** :
- Provide clients with material lifecycle data and EOL circularity plans
- Achieving ESG & regulatory goals.





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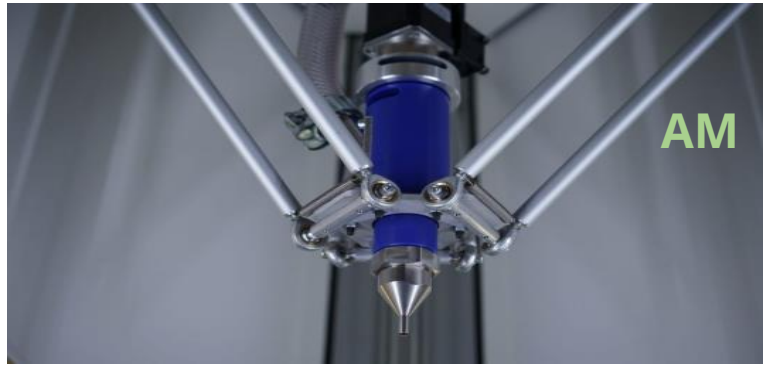
What we do

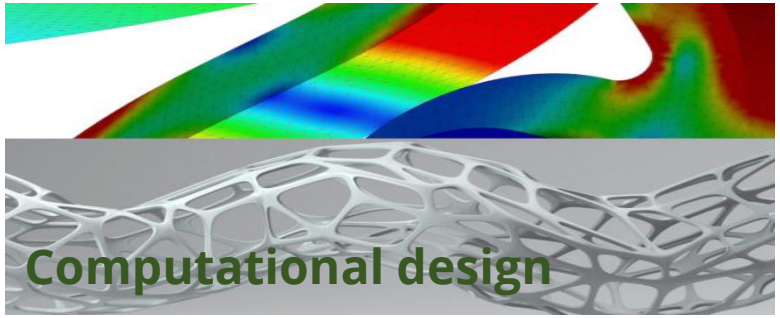
BioG3D established in 2017, specializes in Integrative AM solutions

We provide a hybrid platform of **materials and 3d printing services**, committed to an **end-to-end** digital manufacturing framework and human-centric approaches:

- Reclaimed composite feedstocks – Carbon/glass fiber with recycled polymers, for FFF, FGF and VPP
- AM transition support – DfAM, topology optimization, materials matching
- Prototype & Pilot manufacturing – Functional parts printed with our custom composites
- Circular ecosystem mapping – Connecting recyclers, manufacturers and AM users

✓ **We don't just print high performance customized parts - we build circular pathways for industrial innovation**





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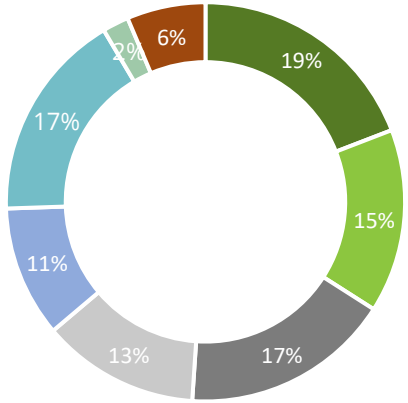
EU R&D Programs



- Sustainability
- Composites
- In-Vitro Assessment
- Biomedical Applications
- Recycling / Product Life Cycle Management
- Universal Design
- Indoor Environmental Quality
- Hardware development

MagNEO

EuReComp

PRecycling

iCLIMABUILT

SENSOPAD

BIOPYRANIA

imPURE

Repair 3D

SmartFAN

m3Dloc

BeActive

CARBO4POWER

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Thank you!

Feel free to reach out:
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