



## **Biomotion Technologies**

### Automation & Reliability In 3D Bioprinting

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#### **Funding:**

Public grant of 50k € in 2020  
Seeking Pre-Seed Round: 500k €

#### **Use of Proceeds:**

- Advance PoC to TRL 6
- Recruitment
- Equipment

#### **Revenue Forecast:**

- 2023: 80k €
  - 2024: 250k €
  - 2025: 600k €
  - 2026: 1.9M €
- Positive Cash Flow/ Break Even :  
- 10/2026 (40 bioprinting systems)

#### **Competitive Advantage:**

- Process Supervision System for 3D bioprinting systems
- Defensible IP

#### **Key Executives:**

- Dr. Gregor Weisgrab, CEO
- Dr. Diego Castaneda-Garay, CTO

#### **Problem**

3D Bioprinting uses cells and biomaterials to produce human tissue-equivalent models, used for drug testing and human implantation. When tissues go from the "R&D" stage to the production stage, their production suffers from a high process variation that restricts their automated production. For example, customers have reported a 20% weight variation, which is problematic for regulatory regulation.

#### **Solution**

We solve the problem of process variation through automated quality assurance during the bioprinting process. Our bioprinting systems are equipped with a sensor-software solution that supervises the bioprinting process and corrects it in real-time, if needed. This way, we can guarantee that all the produced tissues are comparable to each other.

#### **Market**

The global market for 3D bioprinting is estimated to be USD 11.4 B, with a CAGR of 18.8%. The European market is estimated at USD 2.5 B. Our focus is on companies that aim to bring a tissue product to the market, as there are no comparable products on the market at the moment. In the next 3 years, we aim to sell 40 bioprinting systems, with an expected revenue stream of € 4.5 M.

#### **Competitive Landscape**

Our competitors include companies like Cellink, RegenHU, Poietis and Advanced Solutions. Our main differentiator is the automated real-time process correction system. Other bioprinting systems either don't correct their process at all, or rely on skilled individuals to manually correct the processes. We enable our customers to scale their production and reduce their dependence on single bioprocess control engineers.

#### **Business Model**

Biomotion generates revenue through the one-time sale of bioprinting systems and recurring sale of printhead models as well as consumables. The machines with process supervision will be sold with an installed base business model, including a 5-year mandatory maintenance agreement.

#### **Management Team**

Dr. Gregor Weisgrab holds a PhD in automation for tissue engineering applications from TU Wien and he has previously worked on the creation of several human tissue models. Dr. Diego Castaneda is a general surgeon by training with a technical background, who previously developed specialized bioprinting systems in academia. The team met 2016 at the master program Biofabrication where they prototyped innovative bioprinting systems and initiated the base for biomotion.

#### **Traction to Date**

The team had a 1-year PoC test with 2 universities in the Netherlands constantly receiving feedback on the bioprinting system. Moreover, the team has already sold 2 bioprinting systems (without process supervision) to 2 separate university partners. Biomotion is listed as an industry partner of RegMedXB, a public-private partnership establishing the first pilot production line for human tissues for clinical implants.