



Co-funded by  
the European Union



## HEALTHCHAIN STORIES

# OPERART: PRECISION MOULDS FOR PERSONALISED RADIOTHERAPY

## THE NEED

Radiotherapy (RT) is a treatment that consists of administering ionizing radiation to the tumour disease while sparing healthy organs. It is a widely used tool in the treatment of cancer: it is received by more than 60% of cancer patients and more than 40% of those who are cured. RT is designed specifically for each patient using medical imaging and planning systems specially tailored for this purpose.

The development and use of personalised systems for the techniques mentioned before will improve the quality of treatments, which will have an impact on cancer therapy outcomes. In addition, as the devices would be optimally adjusted to the patient's anatomy, the functionality and safety of treatments will be improved and can be performed more easily by professionals.

The main objective is to co-create a system for the personalised generation of 3D molds for use in radiotherapy tailored to each patient's morphology. This mold generating system would be used in the hospital.



## THE HEALTHCHAIN SUPPORT

HealthChain supported Healthcare Organisations in identifying their innovation challenges and selecting companies to address them. They worked closely as an interregional team to co-create, test, and validate a solution aligned with real clinical workflows, patient needs, and organisational constraints. The project provided financial and business support to boost the solution's market-readiness and commercialisation.



## THE SOLUTION

Data Value Management has developed an automated software system that utilises scanner data to design personalised 3D molds, catheters, and boluses for radiotherapy and brachytherapy. This solution integrates with existing hospital infrastructure to automatically extract human body contours and generate 3D files for printing.

By automating these complex design tasks, the software reduces the time required to create molds by approximately 80%, allowing for faster and more precise patient-specific treatments.

## IMPACT

The DVM project shifted the radiotherapy workflow from manual labor to high-precision, automated customization.

- The company is exploring flexible pricing strategies, including SaaS (Software-as-a-Service), licensing, or per-patient pricing to lower entry barriers for hospitals of different sizes.
- Reduction of the operational cost per treatment, resulting from the automation of the radiotherapy workflow, enabling healthcare centers to treat more patients with the same resources and improve the profitability of their units.
- Acceleration of the time-to-treatment, with a direct impact on care capacity, patient satisfaction, and the optimization of the use of high-cost equipment (linear accelerators, treatment planning systems, etc.).
- Commercial scalability of the product, enabled by a software-based model that allows deployment across multiple centers without proportional increases in costs, improving margins as the customer base grows.
- Increased customer retention and revenue recurrence, as the solution is embedded in critical clinical workflows.
- Positioning as a reference technology provider in personalized radiotherapy.

# OUTCOMES

The pilot successfully automated complex design tasks, reaching high levels of technical maturity and operational efficiency.

- The pilot demonstrated an 80% reduction in the design time of radiotherapy molds compared to traditional manual processes.
- DVM developed an automated software system capable of generating personalised 3D-printed molds, catheters, and boluses for radiotherapy based on scanner data.
- Developed an automated software system capable of generating personalized 3D-printed molds, catheters, and boluses directly from scanner data.
- Validated modeling for high-complexity nasal and cranial regions.
- Verified full compatibility with hospital IT systems for seamless scan storage and radiotherapy planning workflows.

# SUSTAINABILITY

DMV has a 24-month plan divided into three clear steps:

- The team will spend six months finishing clinical tests and getting legal certifications;
- They will spend half a year marketing to early-adopter cancer centers;
- Then, they will spend the second year launching the product across public hospitals and research universities.

It also is:

- Built on a scalable B2B recurring model, utilising software licensing fees, hardware sales, and long-term service contracts.
- The system utilizes a modular architecture, ensuring it can adapt as new imaging (MRI/CT) or 3D printing technologies emerge without requiring a total redesign.
- Focusing on oncology centers and radiotherapy units across both public and private sectors.

# TESTIMONIALS

---

*“From a technical and strategic perspective, participation in the HealthChain programme has represented, for a small company like ours, a decisive boost to our innovation capacity and technological maturity. This support has enabled us to undertake the development of a complex product with strong market demand, ensuring a level of quality, robustness, and alignment with real clinical environment requirements that would have been difficult to achieve without this backing. It has also facilitated technological validation in a real-world context, reducing risks associated with scaling and the future exploitation of the product. From the standpoint of technological leadership, the project has contributed significantly to the consolidation of our software architecture, the strengthening of our internal development capabilities, and the definition of a clear technological roadmap, oriented toward sustainable growth and the positioning of the company as a technology reference in a high-value strategic sector.”*

- OLAIÁ GÓMEZ, CTO. Data Value Management

