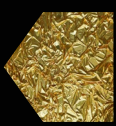




HIGH-TECH MANUFACTURING UNIT

Creating innovations. breaking paradigms.



CUSTOMIZE®

M E D I C A L

GROUP



SPECIAL IMPLANTS

Patient-Specific (Custom Made) or Standard Medical Devices Produced With High Technology Through Additive Manufacturing (3D Printing) in Public or Private Hospital Units: A Breakthrough of Paradigms and Cost Reduction

The high costs of medical devices lead to operational and financial bankruptcy of hospital units of public or private service. However, with the installation of high-tech manufacturing units (HTMU) with low installation and operational costs in public hospitals of regional reference will allow the timely meeting of population demand with a sharp reduction in costs. In this way, it will allow a sustainable environment for the public health system.

Let's start breaking paradigms and making the private/public health system's services self-sustainable through the use of high technology.



ABOUT US

WHO ARE WE

Customize Medical was founded on 2017 by Prof. Dr. Paulo Moraes, DMD- Ms, PhD, Post-Doc (Software Engineer and Maxillofacial Surgeon) who brought to the new company a vision of changing the way people viewed medical devices factories/suppliers. Moraes wanted to make easy, fast and cheap *in-house* process to get custom made (patient-specific) medical devices in clinics or hospitals. Simply put, he wanted a concept that was user-friendly and with high-performance. Customize Medical has officially become the first of its kind anywhere on health productive innovations with its concepts published in the most respected international scientific journals. It must come as no surprise as Customize Medical continues to astonish the medical world with its innovative products and services.

WHAT WE OFFER

We provide installation, training, on-line platform and support of high-tech manufacturing unit (HTMU) applied to healthcare through clean additive manufacturing processes (3D Printer) in small areas for in-house production of medical devices.

ACHIEVEMENTS

In 2022, Customize Medical obtained approval for a project RRP (Recovery and Resilience Plan) from Portugal of 6.4 million euros with EU Innovation Funding for Productive Innovation applied to health.

OUR LOCATION

Our corporate office is located in Portugal and Brazil.




BUSINESS CHALLENGE

- Quality concerns
- Keeping up with the market
- Planning ahead
- Medical device supply chain challenges
- Outdated processes and ensuring successful collaboration
- Lack of skilled workers
- Cash flow and financial management
- Selling direct to consumer
- Maintenance and overheads
- Cyber security
- Automation
- Welcoming change

SOLUTION

We constantly strive for providing effective solutions by leveraging our domain business knowledge, best in productive practices and technical knowledge using our concepts named HTMU & Custom Center. Our customer only needs to install one HTMU locally for the necessary support from our team for production of standard and customized medical devices in-house.



HTMU – HIGH-TECH MANUFACTURING UNIT

HTMU is a high-tech unit using equipment and medical device concepts developed by Customize Medical.

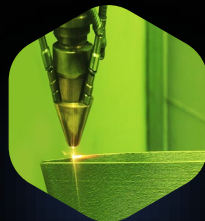
- Applicable in clinics and/or hospitals
- Production of devices without intermediaries
- In-house production
- Cost and time reduction
- Simple and friendly production workflow.
- Updated and scientifically validated products
- Highly skilled technical support

HOW HTMU WORKS.

WORKFLOW STEPS



SURGEON



HTMU



CUSTOMIZE



HOSPITAL

STEPS

- 1- The Surgeon requests a prosthesis
- 2- HTMU receives the exams and require to CUSTOMIZE the project.
- 3- CUSTOMIZE develops the project and send the 3D digital file (STL files) to HTMU.
- 4- HTMU manufactures the prothesis in-house for the clinic or hospital.
- 5- The Clinic/Hospital receives the prothesis for the surgeon take the procedure.

CUSTOMIZE MEDICAL TECHNOLOGIES

The **CUSTOMIZE M-One** Metal Sintering is capable of generating metal parts through the juxtaposition of pulverized metal, which is consolidated on site via laser beam from solid state generator. The piece is generated layered, allowing to give rise to a product of high complexity from three-dimensional CAD data, providing high precision parts and resolution of details, excellent finish and proper mechanical properties.

High precision milling machines for machining PEEK and UHWMPE Polyethylene due to their ability to machine parts with high dimensional accuracy and surface finish.





CUSTOMIZE[®] CENTER



Customcenter is a secure online platform for our customers to use exclusively for uploading and downloading project files/designs for manufacturing prosthetics or medical devices. This platform allows us to quickly and securely send STL files ready for our customers to produce the medical devices in-house.

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HTMU WORKFLOW



HTMU is an innovative concept of a high-tech manufacturing unit created by Customize Medical in the format of Industry 4.0 associated with On-line Platform named CustomCenter within an area of 80-100 square meters for in-house manufacturing of prosthetics and medical devices.

Advantages:

- original concepts published in international scientific journals
- local and autonomy production
- cost reduction of up to 5x
- quick service
- better results
- shorter hospitalization time
- Reduction of logistics costs
- Reaching the poorest population and the most remote regions



ADVANTAGES AND IMPACTS

Economic, Environmental, Social, Technological and Competitiveness Impacts

Economic:

Average of seven (7x) less expensive than existing solutions and may reach up to 10 times less expensive.

Environmental:

Technology reduces to zero the waste coming from the manufacturing processes. It does not produce hospital waste.

Social:

Reinsertion of the Patient in Society; provides Dignity and Happiness for the Patient.

Technological:

Each Trauma Hospital can have its own manufacturing sector, minimizing middlemen

Competitiveness:

A new solution that changes the supply of prostheses, generating competition among market players (a new UBER)



Products and Services:

Production, commercialization and exportation of services for customized medical devices with high technology and quality. The work started with the development of new protocols for surgical planning in a virtual environment - allowed the application of new methodologies for surgical treatment, previously non-existent and unfeasible to be performed due to lack of technology and applied background.

Customize Protocol:

differential: use of combined softwares that allow reducing the modeling time and creation of devices up to 600% faster. Additionally, it allows the creation of unpublished devices, already internationally recognized through the main scientific journals in the world with publications in: Journal of Oral and Maxillofacial Surgery; International Journal of Oral and Maxillofacial Surgery, British Journal of Oral and Maxillofacial Surgery

Conclusion:

Through the implantation of HTMU, the government or the company will be financially relieved. In addition, it will improve the service and demand to the clients.

TRAUMA APPLICATIONS



ORTHOPEDICS



ORTHOGNATHIC



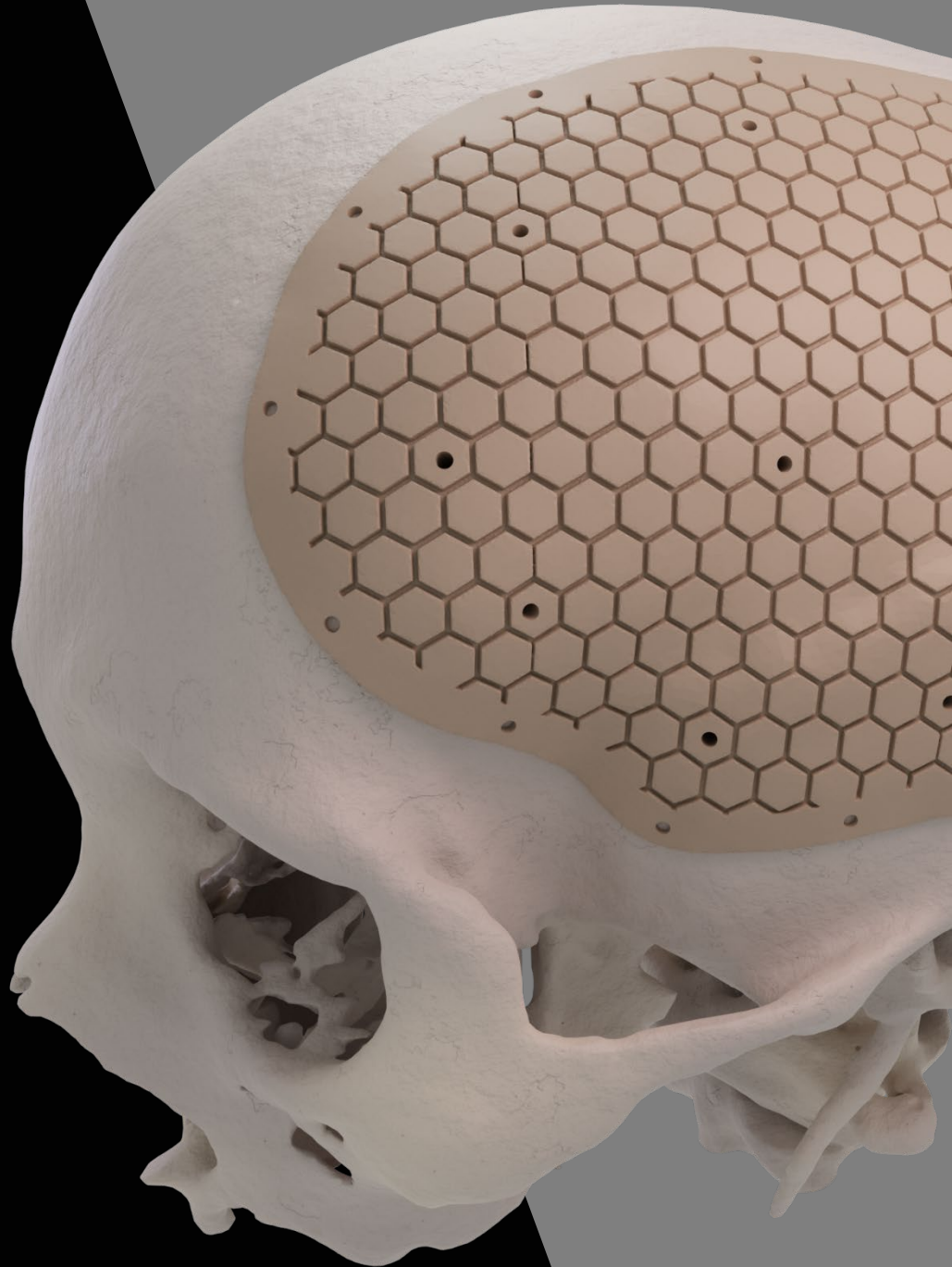
TMJ - TEMPORO MANDIBULAR JOINT



ATROPHIC JAWS REHABILITATION



CRANIOPLASTY



RECONSTRUCTIONS



AESTHETIC PROHTESIS



APPROVED AND CURRENTLY PROJECTS

Eco-friendly process



BIOEQUIP – OZOHealth - Ultrasound-assisted ozone generator for viscous fluids

Customize Medical and IncBio will conceptualise, manufacture and integrate new ozone generation and dispersion equipment for the production of ozonated oils for the health and cosmetics industries. There is ample evidence in the literature that ozonised oils are particularly effective in treating various health conditions caused by bacterial activity. The application of Customize Medical and IncBio's customised ultrasound technology named OZOHealth is presented as the most promising choice for improving ozone mass transfer compared to the ultrasonic irradiation technique or independent ozonation. This increase in ozone mass transfer in the presence of ultrasound enables an innovative approach to the manufacture of new equipment that is scalable, reliable and more economically competitive.



R&D and Product design.

Developing design, new concepts and products and creating prototypes and samples for aesthetic market.

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“Always deliver more than expected”
Larry Page



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